

12-1-1968

## Special Libraries, December 1968

Special Libraries Association

Follow this and additional works at: [http://scholarworks.sjsu.edu/sla\\_sl\\_1968](http://scholarworks.sjsu.edu/sla_sl_1968)

 Part of the [Cataloging and Metadata Commons](#), [Collection Development and Management Commons](#), [Information Literacy Commons](#), and the [Scholarly Communication Commons](#)

---

### Recommended Citation

Special Libraries Association, "Special Libraries, December 1968" (1968). *Special Libraries, 1968*. Book 10.  
[http://scholarworks.sjsu.edu/sla\\_sl\\_1968/10](http://scholarworks.sjsu.edu/sla_sl_1968/10)

This Magazine is brought to you for free and open access by the Special Libraries, 1960s at SJSU ScholarWorks. It has been accepted for inclusion in Special Libraries, 1968 by an authorized administrator of SJSU ScholarWorks. For more information, please contact [scholarworks@sjsu.edu](mailto:scholarworks@sjsu.edu).

# *special libraries*

*December 1968, vol. 59, no. 10*

ERIC

Printed Catalogs

Evaluation for Upper Management

Indiana Plans

National Advisory Commission for Libraries

Annual Index

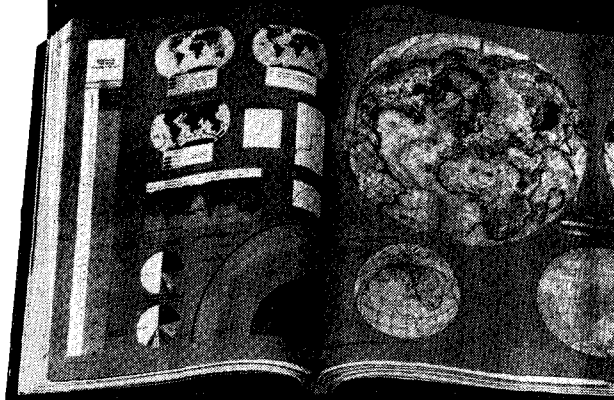
# The New Indispensable International Reference

New . . . Just published September 1968 . . . A must for every home, school and library. A great deal more than just a book of maps, the totally up-to-date PERGAMON WORLD ATLAS does not simply accommodate geographical interests — It widens them . . . In these 525 Pages the World is at Your Fingertips.

## *SPECIAL FEATURES*

- The Iron Curtain Countries — Russia, Eastern Europe, and China — given far greater coverage than has ever before been attempted by any previous western atlas.
- Elaborate maps from earliest Babylon to the latest data and photographs of outer space, the galaxy, and the moon's surface — obtained from recent Soviet and American expeditions.
- Enlarged scale for areas of special interest — The Saharan Landscape, East African Volcanoes, the Lake District, Snowdonia, etc.
- Valuable information on Population, Temperature and Precipitation, Agriculture and Fisheries, Livestock, Mineral Resources and Mining, Power Resources, Heavy Industry, Light Industry, Transport, Foreign Trade, Tourism, Nationalities, War Damage, Migrations and Earthquakes is included on the back of each map — plus special sections are devoted to Geology and the Atmosphere.
- 200 Topographical and 450 Thematic Maps (a thematic map delineates cultural and economic features). Printed in 10 Colors. Enhanced by Full-Relief.
- Thoroughly depicts the physical, hydrographic, political, administrative, and economic features of each nation of the world.
- Beautifully bound in a durable/decorative, laminated-vinyl looseleaf binder — Each map may be individually pulled-out for convenient study . . . No more working with a bulky volume!
- Plus, a 150,000 entry Gazetteer — Gives cross references; details of place names which have changed over the years; notes on pronunciation — and a Glossary of Foreign Expressions and Geographical Terms.

## PERGAMON WORLD ATLAS



## *SPECIAL INTRODUCTORY OFFER*

**Special Introductory Price — \$49.50 / For a Limited Time Only (Regular Price — \$59.50 After December 31, 1968. The Atlas is Now Available for Inspection on Your Bookseller's Shelves. Full-Color Brochure Sent on Request.**



**PERGAMON PRESS, INC.**

44-01 21st Street  
Long Island City, New York 11101

## A SUBJECT GUIDE TO FARADAY PRESS JOURNALS

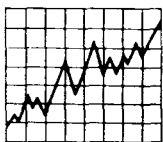
A concise analysis of each of the 33 F...  
the reverse.

[illegible]

## FREE UPON REQUEST



**THE FARADAY PRESS, INC.**  
84 FIFTH AVENUE, NEW YORK, N. Y. 10011



**Predicasts**, INC. provides a complete set of  
tools for the business librarian

***Activities include . . .***

**INDEXING**

F & S INDEX OF CORPORATIONS AND INDUSTRIES indexes and briefs the analysis and news of articles from over 500 publications. In one year the INDEX contains over 150,000 entries arranged by 2,500 subjects and industries and 20,000 companies.

**PRICES:** Weekly—\$96.00 per year. Monthly—\$84.00 per year.

Also F & S ANNUAL and F & S INDEX INTERNATIONAL

---

**FORECAST ABSTRACTING  
& COMPOSITE FORECASTING**

PREDICASTS digests and systematically arranges 30,000 forecasts abstracted from over 500 publications. Coverage ranges from general economics to detailed product. PREDICASTS provides consensus of forecasts through 1980 for 180 basic economic and industrial series.

Quarterly (incl. cumulative) \$172.00 per year.

Also EXPANSION & CAPACITY DIGEST, WORLD-Regional-CASTS and WORLD-Product-CASTS

---

**INDEPENDENT  
ANALYTIC WORK**

INDUSTRY STUDIES on educational technology, cryogenics, biomedical electronics, siding, etc. Studies utilize Predicasts information sources and extensive industry contact and typically cover industry structure, economic environment, end-uses, market projections, and competition.

**PRICE:** \$150.00/study.

Also GROWTH & ACQUISITION GUIDE, ELECTRONICS TRENDS, PAPER TRENDS, PLASTICS TRENDS, Custom Forecasting, Custom Acquisitions & Contract Research

---

Subscribers and clients of Predicasts, Inc. account for well over half of the Gross National Product. They do most of the business literature searching, market research, management consulting, investment research and forecasting, and they include 24 of the 25 largest U.S. corporations.

*For more information or  
no-risk trial subscription write:*

**PREDICASTS, INC., Dept. SL-7  
10550 Park Lane, University Circle  
Cleveland, Ohio 44106**

# *special libraries*

OFFICIAL JOURNAL  
SPECIAL LIBRARIES ASSOCIATION

DECEMBER 1968  
VOLUME 59, NUMBER 10

Implications of the ERIC Clearinghouse for Library and Information Sciences	769	Wesley Simonton
ERIC . . . A National Network to Disseminate Educational Information	775	Harvey Marron
Printed Catalogs: Retrospect and Prospect	783	Estelle Brodman and Doris Bolef
Evaluation of Special Library Service for Upper Management	789	Martha Boaz
Indiana's Planning Library: An On-Going Process	792	Cynthia F. Stoots
The Library-ization of Computers	796	Virginia Boucher
Gutenberg, Frankfurters and IFLA	797	Karl A. Baer
National Advisory Commission on Libraries Report and Comment	800	

## Features

Book Reviews	801	Chapters & Divisions	808
Letters	803	Members in the News	809
Have You Seen?	805	Off the Press	810
Have You Heard?	806	Index to Advertisers	850
Coming Events	807	Instructions for Contributors	851

## Annual Index

---

*Editor:* F. E. McKENNA

*Assistant Editor:* ELAINE C. HARRIS

### Special Libraries Committee

*Chairman:* MRS. CHARLOTTE M. DEVERS, North Castle Public Library  
MARY KLANIAN, Advanced Systems Development Division, IBM  
MRS. ANNE J. RICHTER, R. R. Bowker Company

INDEXED in *Business Periodicals Index*, *Documentation Abstracts*, *Historical Abstracts*, *Hospital Literature Index*, *Library Literature*, *Library Science Abstracts*, *Management Index* and *Public Affairs Information Service*.

Papers published in *SPECIAL LIBRARIES* express the views of the authors and do not represent the opinion or the policy of the editorial staff or the publisher. ● Subscriptions: U. S. and Canada \$20.00; add \$1.50 postage for other countries; single copies, \$2.75. ● Annual author-title-subject index published with December issue. © 1968 by Special Libraries Association. ● *SPECIAL LIBRARIES* is published by Special Libraries Association, monthly September to April, bimonthly May to August. Editorial offices: 235 Park Avenue South, New York 10003. Second class postage paid at Brattleboro, Vermont 05301. ● POSTMASTER: Send Form 3579 to 235 Park Avenue South, New York 10003.



### President

HERBERT S. WHITE      Leasco Systems and Research Corporation  
4833 Rugby Drive, Bethesda, Md. 20014

### President-Elect

ROBERT W. GIBSON, JR.      General Motors Corp., Research Laboratories  
12 Mile & Mound Roads, Warren, Mich. 48090

### Advisory Council Chairman

MRS. CHARLOTTE S. MITCHELL      Library, Miles Laboratories, Inc.  
Elkhart, Indiana 46514

### Advisory Council Chairman-Elect

HELEN J. WALDRON      The RAND Corporation  
1700 Main St., Santa Monica, Calif. 90406

### Treasurer

JEAN DEUSS      Research Library, Federal Reserve Bank of New York  
1967-70      Federal Reserve P. O. Station, New York 10045

### Past-President

MRS. ELIZABETH R. USHER      Art Reference Library  
The Metropolitan Museum of Art  
Fifth Avenue and 82nd Street, New York 10028

### Directors

MRS. THEODORA A. ANDREWS 1966-69	Pharmacy Library, Purdue University Lafayette, Indiana 47907
ROSEMARY R. DEMAREST 1968-71	Price Waterhouse & Co. 60 Broad Street, New York 10004
MRS. GLORIA M. EVANS 1967-70	Production and Engineering Library Parke, Davis & Company, Detroit, Michigan 48232
CHARLOTTE GEORGI 1966-69	Graduate School of Business Administration Library University of California, Los Angeles, Calif. 90024
EFREN W. GONZALEZ <i>Secretary</i> , 1967-70	Scientific Division, Bristol-Myers Products 1350 Liberty Avenue, Hillside, New Jersey 07207
BURTON E. LAMKIN 1968-71	Federal Aviation Agency 800 Independence Ave. S.W., Washington, D. C. 20553

### Executive Director

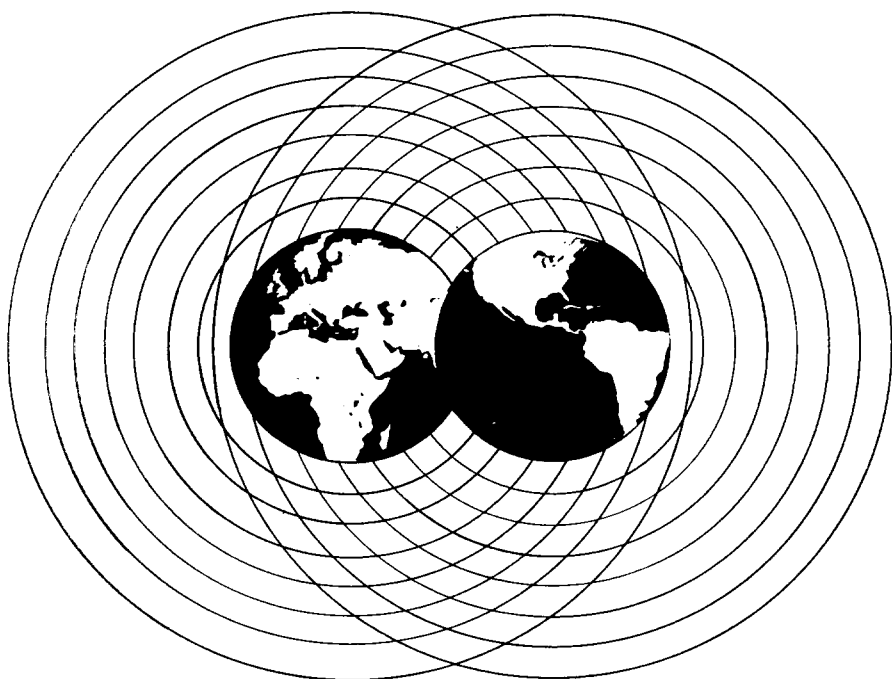
GEORGE H. GINADER      Special Libraries Association  
235 Park Avenue South, New York 10003

### SLA Translations Center

John Crerar Library, 35 West 33rd Street, Chicago, Illinois 60616

### Membership

1969 DUES. Active, Associate or Affiliate \$30; Student \$5; Emeritus \$5.  
The one-time payment for Active (Paid for Life) Membership is \$350.



## Two widely acclaimed classics on international relations now reprinted for the first time!

For every teacher, scholar, researcher, student, librarian, statesman, and writer interested in foreign affairs—here are brand-new reprints of **FOREIGN AFFAIRS BIBLIOGRAPHY 1932-42** and **FOREIGN AFFAIRS BIBLIOGRAPHY 1942-52**.

Together these authoritative volumes annotate nearly 20,000 books on all aspects of international relations—including contemporary diplomacy, comparative government, population and racial problems, modern warfare.

The subject-arranged entries give author's full name, place and date of publication, publisher, pagination. Many of the annotations are based on critical evaluations which have appeared in *Foreign Affairs* magazine. Sponsored by the Council on Foreign Relations, these bibliographies are world-famous for their impressive scholarship and objective viewpoint.

**FOREIGN AFFAIRS BIBLIOGRAPHY 1932-42** covers 10,000 books in some 36 languages, including Turkish, Hebrew, Arabic, Chinese and Japanese. Compiled by Robert Gale Woolbert. Author Index. 705 pages.

**FOREIGN AFFAIRS BIBLIOGRAPHY 1942-52** includes more than 9000 titles in 34 languages from Afrikaans to Yiddish. Compiled by Henry L. Roberts. Title and Author Indexes. 727 pages.

Postpaid price for each clothbound volume: \$20 net in the U.S. and Canada; \$22 elsewhere. In New York please add applicable sales tax. Published for the Council on Foreign Relations by the R. R. Bowker Company. February 1969.



**R. R. BOWKER COMPANY**  
1180 Avenue of the Americas  
New York 10036



*Now Undercover!*

## International Directory of Back Issue Vendors: Periodicals, Newspapers and Documents. 2d enl. ed.

*Compiled by F. John Neverman*

1968 Soft Cover 104 pages (6 x 9) \$2.25 LC 68-57264

\* \* \*

*Listings include*

- Periodicals
- Documents
- Newspapers
- Newspaper Indexes

The *Directory* contains more than 240 listings of back issue vendors in the U.S. and abroad. It is an enlarged version of the first edition, "International Directory of Back Issue Periodical Vendors," published in 1964.

Separate indexes for periodicals by language and subjects; index for documents by country or agency of publication; index for newspapers and newspaper indexes by place of publication.

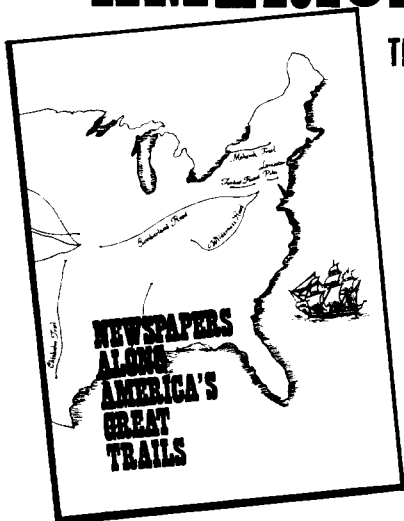
*Order Today!*

**SPECIAL LIBRARIES ASSOCIATION**

235 Park Avenue South, New York, N. Y. 10003

**LATEST  
CATALOG  
LISTING . . . . .**

# NEWSPAPERS ALONG AMERICA'S GREAT TRAILS



### These Newspapers May Be Purchased on 35mm Microfilm

Bell & Howell compiled this new catalog of Newspapers Along America's Great Trails to help researchers and historians recapture the real vitality that was America coming to life along her growing frontiers.

All newspapers listed in the catalog are part of the archival collection in Bell & Howell's Micro Photo Division vault. They have been selected for this catalog because of their special interest to students of America's frontiers.

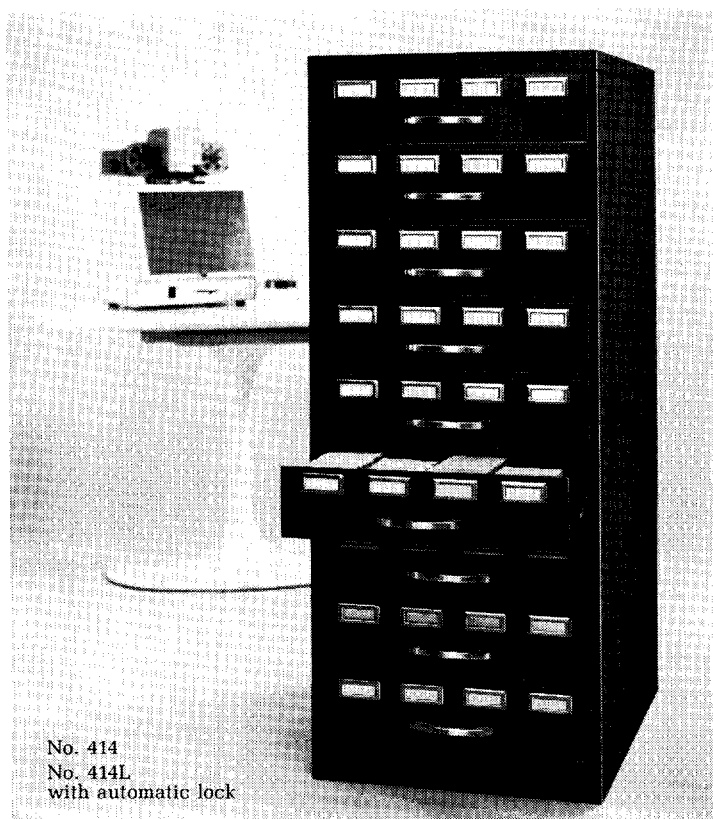
*Please write for your free copy from:*

**MICRO PHOTO DIVISION**  
1700 SHAW AVE. CLEVELAND, OHIO 44112



**BELL & HOWELL**

# Gaylord Microfilm Cabinet



No. 414  
No. 414L  
with automatic lock

**... a complete centralized filing system for both 16mm and 35mm rolls ... featuring high quality at low cost ... a best buy in every way**

With this in your library you can keep all of your microfilms together ... safe, handy, instantly available ... in a handsome, modern, compact all metal storage cabinet, only 20¼" wide, 28½" deep, 52" high.

- **LARGE CAPACITY**

Nine four-compartment drawers hold up to 900 rolls of 16mm or 612 rolls of 35mm, or any combination of the two sizes.

- **RAPID RETRIEVAL**

Locate any film in seconds.

- **DELUXE CONSTRUCTION**

Sturdy metal throughout. Smooth rolling drawers have thumb latch control, open wide without spilling.

- **16 STANDARD COLORS**

or custom finished to your specifications. Standard colors: Beige, Black, Brown, Cordovan, Parchment, Royal Russet, Sandstone, Gray (5 shades) Green (4 shades). On special order (small extra charge) we will lacquer these cabinets to match your color sample.

- **AUTOMATIC DRAWER LOCK**

Optional at small extra charge.

Please write for prices and further information.

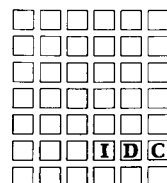
 **GAYLORD**  
LIBRARY SUPPLIES AND EQUIPMENT

GAYLORD BROS., INC. • SYRACUSE, N. Y. 13201 • STOCKTON, CALIF. 95201



Зонов, В. В. V  
Гидрология рек бассейна Братского водохранилища.  
Москва, Наука, 1966  
167 р., иллы., табл. 26 шт.  
At head of title: Академия наук СССР. Сибирское отделение.  
Лимнологический институт. Б. В. Зонов, М. Ф. Шульгин.  
Includes bibliographies.  
I. Hydrology—Russia—Angara Valley. I. Shul'gin, M. F.  
II. Title. This romanized: Gidrologiia rek bas-  
seina Bratskogo vodokhranilishcha.  
67-119079  
GB789.Z6  
Library of Congress

INFORMATION  
DYNAMICS  
CORPORATION



"I found LC 67-119079 in less than two minutes . . . all by myself." That's how easy LC searching is with IDC's Micrographic Catalog Retrieval System. It's the new System that lets libraries use their professional staff to the best possible advantage. And, makes LC search and print out so routine even clerical personnel have no difficulties.

# IMAGINE THAT...

IDC's Micrographic Catalog Retrieval System puts an end to the days when it took a real "pro" to unscramble the Library of Congress Catalog. This new, high speed system automates LC search and print out procedures. To begin with, we've compiled a quick-find Index by both LC Card Number and Main Entry. Then, the actual LC entries are reproduced on Microfiche cards, over 1,100 entries on each card. (A 20-inch desk-top Microfiche file contains millions of entries.) Your people simply locate the entry in the Index, select the proper Microfiche card, and insert this card in a Reader Printer. Six seconds later . . . a full-size LC copy.



The M-C-R System gives you complete LC searching and print out at a single desk.

IDC's Micrographic Catalog Retrieval System is always up-to-date . . . weeks ahead of ordering printed LC cards and includes back issues through 1963. Subscribers receive weekly issues on Microfiche of approximately 3,000 advance release LC cards, all alphabetized and interfiled by Main Entry.

Cumulative supplements, issued monthly, quarterly, and annually, are also provided, completely indexed by LC Card Number and Main Entry.

The M-C-R System is the best way to increase the effectiveness of your professional's time, speed work flow, and keep up with current LC output. If you would like us to show you exactly what we mean, simply return this time-saving coupon.

To: Information Dynamics Corporation  
Library Systems and Services Division  
81 Main Street, Reading, Massachusetts 01867

Gentlemen:

HELP! ☐ Send me more information on the M-C-R System.

☐ Have your representative call me for appointment.

☐ I would like a demonstration in my area on \_\_\_\_\_

Name \_\_\_\_\_

Position \_\_\_\_\_

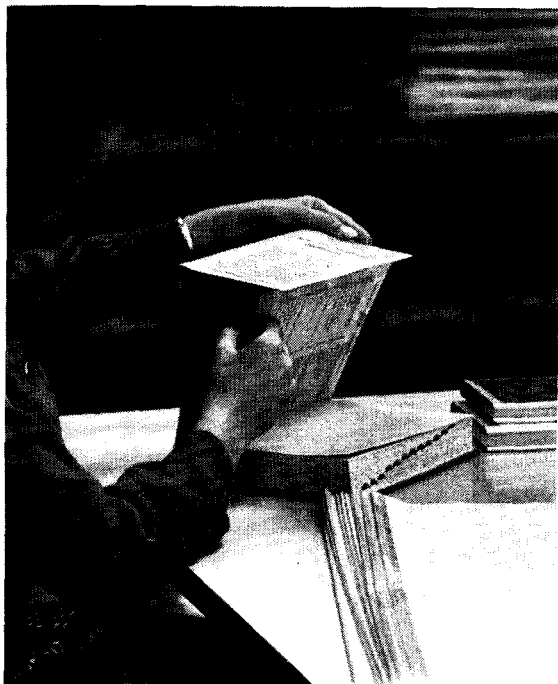
Library \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_



# What book processing centers need is a good 5½¢ book jacket cover.



Inexpensive enough to give all books a cover! Low-cost protection for your largest investment. Patron-appeal, because books stay new looking for years.

The new, adjustable 1½ Mil Mylar® Book Jacket Cover costs as little as 5½¢ per cover, when purchased in quantity by large libraries or book processing centers. Four sizes adjust to most books. Keeps your inventory under control.

Saves processing time, too. No measuring or cutting. Cover slips on in seconds. Then crease to size and tape!

Write on your school or company letterhead for a free descriptive brochure and quantity pricing.

**DEMCO** Box 1488, Madison, Wisconsin 53710

# Negro history comes to you in the Schomburg Collection on microfilm.



Study and research Negro history in the Schomburg Collection from The New York Public Library. Now available on 35mm microfilm by 3M IM/PRESS.

Order ☐ **The Colored American**, March 14, 1840—March 13, 1841, one roll. ☐ **The Crisis**, Nov. 1910-63, ten rolls. ☐ **The Liberator**, (W. Lloyd Garrison), Jan. 1831—Dec. 1865, 11 rolls. ☐ **The Liberator**, (American Negro Labor Congress), Dec. 7, 1929—Dec. 15, 1932, one roll. ☐ **The Messenger**, The only radical Negro magazine in America, Nov. 1917—May/June 1928, one roll. ☐ **National Anti-Slavery Standard**, June 11, 1840—April 16, 1870, July 30, 1870—Dec. 23, 1871, ten rolls. ☐ **The Negro Worker**, Jan. 1931—Sept./Oct. 1937, one roll. ☐ **Negro World**, July 3, 1926—June 3, 1933, one roll. ☐ **New York Age**, Jan. 5, 1905—Feb. 27, 1960, 31 rolls. ☐ **Opportunity**, Journal of Negro Life, 1923-49; four rolls. ☐ **Voice of the Negro**, 1904-07, one roll. This collection is priced at \$18 per roll or \$1,296 for the entire set of 72 rolls.

New this year: ☐ **The Life and Works of Paul Laurence Dunbar**, a popular American

Reproduced through courtesy of New York State Historical Assoc.

Negro poet. Includes manuscripts, letters, reviews, sheet music, books in 16mm microfilm cartridges. Total price: \$268.

**3M IM/PRESS**  
INTERNATIONAL MICROFILM PRESS

3M IM/PRESS, P.O. Box 720, Dept. FCS-128, Times Square Station, New York, N.Y. 10036

- ☐ Please send the **Schomburg Collection** on microfilm for \$1,296.  
☐ Send only the titles @ \$18 per roll listed below:

- ☐ Please send **The Life and Works of Paul Dunbar** in 16mm cartridges and open reels for \$268.  
☐ My check for \$\_\_\_\_\_ is enclosed.  
☐ Please bill me.

NAME \_\_\_\_\_

FIRM OR LIBRARY \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

---

# *Just Published by the*

## NATIONAL ACADEMY OF SCIENCES

### **Principles of Plant and Animal Pest Control: Volume 1—Plant-Disease Development and Control**

A comprehensive report on the principles of plant-disease control, intended to serve as a guide to effective planning of educational, research, and extension programs. This useful information source identifies the principles and problems that influence the control of plant diseases, outlines the current status of knowledge relating to the principles of effective control, and cites significant supplementary sources of information on the subject.

Publication 1596; Committee on Plant and Animal Pests, 1968, xvi + 205 pages, paper, \$4.75

### **Water and Choice in the Colorado Basin**

Contains information of interest to individuals, organizations, and industries involved in the use and management of water and related resources. Among other things, the report sketches the physical and economic setting and reviews the history of water development and planning in the Colorado basin, describes the broad range and diversity of public and private aims in water management, and illustrates alternative ways of achieving those aims. Presents discussions applicable to all basins throughout the United States and elsewhere in the world.

Publication 1689; Committee on Water, 1968, x + 107 pages, paper, \$2.50

### **The Mathematical Sciences: A Report**

Describes the intellectual content and state of the mathematical sciences, the problems in undergraduate and graduate education in these sciences, and the present status and trends of financial support. Also discusses the tasks and needs of these sciences, primarily in the area of research, and assesses the significance of mathematical research from the national point of view.

Publication 1681; Committee on Support of Research in the Mathematical Sciences, 1968, xiv + 256 pages, paper, \$6.00

### **Research in Optical Spectroscopy: Present Status and Prospects**

Presents a historical review and a summary of current information on spectral term analysis, and discusses current worldwide research activities and opportunities in each of various subfields of atomic spectroscopy. This report also emphasizes the need for strengthening university programs of study in the field so that universities will be able to provide well-trained spectroscopists in sufficient numbers to meet the demands of government and industrial laboratories.

Publication 1699; Committee on Line Spectra of the Elements, 1968, viii + 36 pages, paper, \$1.95

### **Careers of PhD's:**

#### **Academic Versus Nonacademic**

A study of career patterns based on postdoctoral employment of 10,000 men and women holding third-level research degrees. The report places particular emphasis on factors relating to switching of employer categories and makes an effort to draw forth from longitudinal data important inferences regarding the dynamics of careers. Includes 64 tables and figures presented in two colors.

Publication 1577; Office of Scientific Personnel, 1968, xii + 108 pages, including 64 tables and figures in two colors, paper, \$6.00

### **Planetary Astronomy: An Appraisal of Ground-Based Opportunities**

Directs attention to ways in which ground-based astronomy can serve to enrich our knowledge of the solar system and contribute to the effectiveness of our national space program. The report makes specific recommendations on present and projected requirements for personnel, personnel training, and new or improved instruments and facilities.

Publication 1688; Panel on Planetary Astronomy, 1968, x + 76 pages, paper, \$3.50

*Complete Catalog Available Upon Request*

National Academy of Sciences • Printing and Publishing Office  
2101 Constitution Avenue • Washington, D.C. 20418

# *special libraries*

---

As one of the 19 specialized clearinghouses of the Educational Resources Information Center of the U.S. Office of Education, the Clearinghouse for Library and Information Sciences (ERIC/CLIS) is part of a national information system for dissemination of educational resources and research-related material. Basic functions performed by all clearinghouses include acquisition and evaluation of documents, indexing and abstracting for *Research in Education*, maintaining local files, information analysis, and maintaining close relations with professional associations and agencies in the communities served. After summarizing the current activities of ERIC/CLIS, the author indicates several directions in which ERIC/CLIS might move in order to fulfill its responsibility for contributing to the improvement of the bibliographic control of the literature of library and information science.

## Implications of the ERIC Clearinghouse for Library and Information Sciences

WESLEY SIMONTON

**B**ECAUSE THE ERIC CLEARINGHOUSE FOR Library and Information Sciences operates within the general framework of the total ERIC system and because our general procedures are designed to be in harmony with those of the total system, it is appropriate to begin any description of the activities of our clearinghouse with an account of general ERIC policies and practices.

The acronym ERIC stands for Educational Resources Information Center. It is a program of the Bureau of Research of the U.S. Office of Education aimed at developing a national information system dedicated to the progress of education through the dissemination of educational resources and research-related material. In part, it has developed out of the need of the Office of Education for information on the great number of research projects supported by the Office. Since 1956 when the Cooperative Research Act was

passed, the Office of Education outlay for research has increased from \$1 million to over \$100 million. But, even more important, it grows out of the recognition of the need of the educator to have access to the work of others in his field.

Librarians are generally familiar with the activities of the federal government relating to the improvement of the bibliographic control of scientific and technical literature and to the effective dissemination of that

*Dr. Simonton is director of the ERIC Clearinghouse for Library and Information Sciences at the University of Minnesota, Minneapolis. His paper was presented on June 3, 1968 at the Second General Session of SLA's 59th Annual Conference in Los Angeles.*



literature. The ERIC system may be viewed as a sign of federal interest in similar activities for a large segment of the social sciences literature. It is therefore most important for the library and information science communities to be aware of this interest and to do all within their power to support and develop this project.\*

## ERIC's Major Functions

The present major functions of the system are six in number. Although the individual clearinghouses differ to a certain extent in their services the following functions may be identified as common to all:

1. *The identification and acquisition of "fugitive" literature.* First attention in ERIC is given to acquiring materials not widely known to the profession at large, such as technical reports, surveys, conference proceedings, unpublished speeches, curriculum materials and the like.

2. *Evaluation of the literature collected.* Evaluation of documents and their contents may occur at a number of points in the ERIC system. The first point is the selection of items to be included in *Research in Education*, the monthly ERIC bibliography of the Government Printing Office (annual domestic subscription \$21.00). At the present time each clearinghouse is authorized to input up to 50 documents per month to the bibliography. Only the most important documents received by the clearinghouses are listed in *Research in Education*.

3. *Indexing and abstracting.* *Research in Education* is a bibliography of abstracts of current documents and projects, arranged in accession-number order, with author, institution and subject indexes. The abstracts are usually 200 words in length and informative rather than indicative whenever possible. The subject indexes are based on the *Thesaurus of ERIC Descriptors* (First edition, December 1967, and Supplement No. 1, March 1968, available from Government Printing Office at \$2.50 and \$2.00, respectively) which was originally based on the collection of 1,740 documents on the disad-

vantaged. As the clearinghouses have been established, the scope of the thesaurus has been expanded greatly and there are now over 3,200 descriptors included. The thesaurus employs the common methods of indicating relationships among descriptors, with "use for," "broader terms," "narrower terms," and "related terms" references indicated whenever appropriate.

4. *Maintaining local collections.* The local files of documents are usually available for on-site consultation and form the basis of the information analysis activities of the clearinghouses. The total number of accessioned documents in the 19 clearinghouses is now over 50,000.

5. *Information analysis.* The clearinghouses cannot provide detailed replies to inquiries for information on specific topics, particularly from individuals. However, an important function of the clearinghouses is to identify the current questions of interest to the individual professional communities served and to attempt to respond in advance to these needs through the preparation of bibliographies, review articles, state-of-the-art reports, and other similar services. These bibliographies and articles are disseminated in a variety of ways: through *Research in Education*, through professional journals, and in the form of separate publications. It is hoped that ERIC will be supplemented by local information centers for disseminating information even more widely. Such centers might include the regional education laboratories, state or local departments of education, and Title III regional information centers.

6. *Provision of copies of documents.* All documents announced in *Research in Education*, unless they are subject to copyright restrictions or are readily available from some other source such as the Clearinghouse for Federal Scientific and Technical Information, are made available through the ERIC Document Reproduction Service (4936 Fairmont Avenue, Bethesda, Md. 20014) in either microfiche or hard copy form. (Current prices: for microfiche, 25¢ per fiche, or 8.4¢ on standing order; for hard copy, 4¢ per page.)

These then are the specific major activities and functions of the clearinghouses: acquisition and evaluation of documents, indexing

\* EDITOR'S NOTE: The major components of the ERIC system are described by Harvey Marron in this issue of this journal.

and abstracting, maintaining local files, information analysis and provision of copies of documents through *Research in Education*. To this list of specific functions we should probably add the general one of maintaining close relations with professional associations and agencies in the communities served. Such relations are essential if the clearinghouses are to be aware of and responsive to the needs and the problems of the community; they may be very useful in the acquisitions operation; and, finally, they may represent a very effective channel for dissemination of information, both formally (for example, through the publication of abstracts and bibliographies in journals) and informally.

In addition to these present functions, consideration is being given to two possible expansions of the ERIC system. First, studies are presently underway to identify the significant journals in the fields of interest of the clearinghouses, with a view to the possible indexing and abstracting of the most important journal literature as a part of the system. Second, a study is presently underway by North American Rockwell to identify the cost of a national network with a central computerized storage file providing on-line access for school districts, universities, and other institutions to the ERIC clearinghouses, the regional educational laboratories, state office of education, and other agencies. Again, the future is uncertain but it is hoped that such a network, providing major services for the entire educational community, will be developed within the next three to five years.

## ERIC/CLIS

The following goals and present activities are presented in the context of the foregoing description of general ERIC functions and services. First, our official scope is "the operation of libraries and information centers, the technology used to improve their operations, and the education and training of librarians and information specialists." For present purposes we have devised a rough four-fold categorization of topics to guide us in determining the relevance of a given document for our clearinghouse.

First, we are definitely interested in documents covering broad subjects relating to all types of libraries (academic, public, school, and special) and information centers:

- a) Establishment and purpose
- b) Legislation and relations with the state
- c) Patterns of organization
- d) Buildings and equipment
- e) Cooperation, systems, and networks
- f) Personnel, including training

Our second category includes documents relating to operations performed in libraries and information centers:

- a) Acquisition and resources
- b) Subject analysis, including indexing, abstracting, and classification
- c) Reference work and public services
- d) Maintenance of collections
- e) Mechanization of any of these operations, systems analysis, and on-line systems

Documents on subjects in these two categories are all definitely within our scope.

Our third category includes topics such as:

- a) Patterns of information presentation and dissemination
- b) User studies, needs, and services
- c) Information systems, including man-machine interaction
- d) Publishing and the book trade
- e) Documentary reproduction

Documents on these topics will in most instances be of interest to us, but perhaps not as directly pertinent as those in the first two groups.

The last group represents topics in information science such as:

- a) Artificial intelligence
- b) Cybernetics
- c) Linguistics and language research, including computational
- d) Semantics
- e) Theory of formal grammars

Documents on such topics as these are less likely to be relevant to the scope of CLIS than those in the other three groups, but those with special relevance for the operation of libraries and information centers are welcomed.

## Staff of ERIC/CLIS

Other staff members include Mr. David K. Berninghausen, Director of the Library School of the University of Minnesota, who serves as Co-director of the Clearinghouse, Mr. Rameshwar N. Paul, Assistant Director for Information Retrieval and Miss Joanne Boelke, Mrs. Christina Copenhaver, and Mrs. Charlene Mason, Document Analysts.

In the development of our policies and procedures, we depend heavily on the advice and counsel of our Advisory Board. The members of the Board are Richard S. Angell, Chief, Technical Processes Research Office, Library of Congress; Joseph Becker, Director of Information Sciences, EDUCOM; Charles P. Bourne, Director, Advanced Information Systems Division, Programming Services, Inc.; William S. Budington, Librarian, John Crerar Library; Ruth M. Ersted, Supervisor of School Libraries, Minnesota; Harold Hacker, Director, Rochester Public Library and Monroe County Library System; Rutherford D. Rogers, Director, Stanford University Libraries; Frank L. Schick, Director, School of Library and Information Science, University of Wisconsin-Milwaukee; and Jesse H. Shera, Dean, School of Library Service, Case Western Reserve University. In December 1967, all members of the Board attended a two-day meeting at CLIS devoted to discussion of policies and procedures designed to meet the needs of the several communities which we shall be serving.

## Present Activities of ERIC/CLIS

1. *Publicity.* In addition to brief notices of our establishment in the major library journals, articles designed to inform a large segment of the library profession of our goals and procedures appeared in the *Wilson Library Bulletin* (Dec. 1967) and the 1968 *Boucker Library Annual*.

2. *Acquisitions.* The development of an acquisition network represents one of our most difficult tasks. The establishment and maintenance of an effective system for securing fugitive material is not an easy matter. Central ERIC assists us in the procurement of documents from federally supported re-

search activities in the library and information sciences, but beyond this we are on our own in acquisitions. We have recently completed a mailing of over 400 letters to library schools, state librarians, state library associations, state school library supervisors, the major academic and public libraries of the country and the major private research agencies in an attempt to establish formal relations for securing documents.

• • • Because a list of major special libraries is not available, ERIC/CLIS solicits your cooperation in furnishing copies of substantive reports, surveys, plans, and other documents which may be of any conceivable value for us. • • •

3. *Cooperation.* We have engaged in a number of discussions, individually and collectively, with the other major agencies involved in the bibliographic control of library and information science literature—*Library Literature*, *Library Science Abstracts*, *Documentation Abstracts* and the *Annual Review of Information Science and Technology*—in an attempt to work out meaningful and effective relationships. In this connection, the recommendations of the Conference on Bibliographic Control of Library Science Literature which was held at the State University of New York at Albany on Apr. 19-20, 1968 are of interest. Although the participants in the conference represented only an ad hoc group, assembled primarily on the initiative of library school librarians, the conference proved to be an effective forum for discussion of our important problems, and I am hopeful that many of the recommendations will be implemented. The full text of the recommendations has been published in the May 1968 *Newsletter* of the ALA Library Education Division. Some of the major recommendations are as follows:

1) The improvement of existing indexing and library services, the establishment of urgently needed new ventures and the long-range study of what should constitute the best arrangements for effective bibliographic control in our field should all proceed simultaneously.

2) In view of the fact that *Library Literature* is the permanent comprehensive bibliographic base for our profession, it should (a) be expanded and strengthened in both scope and comprehensiveness, (b) be fully international in coverage and include all forms of publication, (c) be issued more frequently, monthly or bimonthly,

(d) undertake continuous revision of subject headings and publish a list of new headings in each issue, (e) undertake and encourage research and experimentation to improve its indexing vocabulary, which should permit deeper indexing and should have a more effective syndetic apparatus, (f) consider the advantages to the user of format changes such as arranging the current issue entirely by subject and date with a separate author index or, while retaining the present dictionary arrangement, listing entries by title under each subject heading.

3) The three established English language indexing services (*Library Literature*, *Library Science Abstracts*, and *Documentation Abstracts*) in cooperation with the new ERIC Clearinghouse for Library and Information Sciences should come to a joint agreement upon the scope and policy of each service in order to insure adequate indexing of all kinds of materials and to guard against needless duplication.

4) It is the responsibility of all international, national and regional library associations and their component divisions to supply all their publications to the various bibliographic services. All other organizations, agencies, educational institutions, and libraries, that publish materials relevant to our field should share the same responsibility. It is also desirable to establish depository agreements among such organizations and certain library school libraries in order to assure preservation and availability of copies of materials listed by the indexing services.

5) The establishment of a review of the year's work in librarianship, based on the selected, organized, and evaluated literature of the field, is recommended. Each division of the American Library Association should take responsibility for seeing that the articles are prepared to cover their respective areas of responsibility. Publication of a single annual volume is recommended with the possibility that the separate articles also be published in the journals of the respective divisions.

6) A fast announcement service for the purpose of library school acquisitions should be instituted. This service should exclude trade monographs and those periodicals indexed in *Library Literature* and *Library Science Abstracts*. This service should include: new periodical titles beginning January 1968; research reports on librarianship and related fields; foreign publications; offprints and reprints available in multiple copies; promotional materials useful for teaching purposes; library publications and other material generated by or for libraries, i.e., surveys, directories, statistical reports, handbooks, staff newsletters, procedure manuals, annual reports, and library histories. Bibliographic description should include price, publisher's address, and report numbers.

As indicated in the recommendations, the responsibility of ERIC/CLIS to serve as an important point of reference in the development of adequate bibliographic control of library and

information science literature is apparent. In addition to contact with these agencies, we have also established a close relation with the Library Research Clearinghouse of the Office of Research and Development of the American Library Association. As its name implies, this clearinghouse keeps track of research in progress in the library profession and, like ERIC, depends in large part on the cooperation of the profession for success. Please send notices of current research in progress to ALA and copies of reports and other documents to ERIC/CLIS.

4. *Input for Research in Education*. To date we have processed 105 documents for RIE. Only a few of these have appeared in print yet, because our first entries appeared in the April 1968 issue.

5. *Information Analysis*. Like most of the other clearinghouses, we consider the production of bibliographies as the most logical first phase of information analysis activities. The first step in the production of bibliographies is, obviously, determination of subjects on which bibliographies are needed. To this end, we have extensively reviewed recent library literature and begun the compilation of a file of bibliographies in the field of library and information science (available as yet only in card form at ERIC/CLIS) in order to determine gaps in the field. We have recently completed a publication\* relating to library technical assistants. In addition to reviewing the literature on this subject, we have made numerous individual contacts in an attempt to assemble up-to-date information. We are also considering the preparation of bibliographies on such subjects as metropolitan libraries and library service to the disadvantaged.

## Summary

This consideration of the "implications" of the ERIC Clearinghouse for Library and Information Sciences has perhaps been more implicit than it should have been. In summary, let me emphasize two major points.

---

\* BOELKE, Joanne. *Library Technicians: A Survey of Current Developments*. Minneapolis, ERIC Clearinghouse for Library and Information Sciences, 12p. 1968. (Available from ERIC Document Reproduction Service as ED 019 530; microfiche \$0.25, hard copy \$0.56.)

First, ERIC/CLIS is part of a large and significant system, which in itself will be of interest to all who are engaged in handling information. Approximately 15,000 documents within the field of education, as defined by the areas of interest of the nineteen clearinghouses, have been abstracted and indexed and the results made available to the public. Over 5,600 copies of *Research in Education* are distributed monthly, 4,000 of these representing paid subscriptions. There are about 200 standing orders for all microfiche produced by the system, including 53 supported by ERIC. Our own contribution to the system has been small to this point. We hope that it will increase significantly and we seek your cooperation in this endeavor.

Second, ERIC/CLIS has a major responsibility to contribute to the improvement of the bibliographic control of the literature of library and information science. We are stimulated by this assignment; we sense that the opportunity is at hand for achieving

significant improvements in this important area; we seek the cooperation of all individuals and agencies with a similar interest and we pledge our cooperation in this task.

## References

For further information on the ERIC system in general, see:

BURCHINAL, Lee G. ERIC and Dissemination of Research Findings. *Theory Into Practice*, v.6: p.77-84 (Apr. 1967).

BURCHINAL, Lee G. ERIC and the Need to Know. *NEA Journal*, v.56: p.65-72 (Feb. 1967).

MARRON, Harvey and BURCHINAL, Lee G. ERIC—A Novel Concept in Information Management. In *Proceedings of the American Documentation Institute*, v.4: p.268-272 (1967).

*Educational Researcher*, Supplement 1967. This issue of the official newsletter of the American Educational Research Association, devoted to information storage, retrieval and dissemination, contains much information on ERIC.

The first issue of the *ERIC/CLIS Newsletter* (Sep 1968) will be sent to all who have requested information about ERIC/CLIS and its activities. If you wish to be included on the mailing list, write:

ERIC Clearinghouse for Library  
and Information Sciences  
University of Minnesota  
2122 Riverside Avenue  
Minneapolis, Minn. 55404

The ERIC network (Educational Resources Information Center) is described with particular attention to not only how it works but how it differs from the more usual information programs. The advantages and disadvantages are reviewed; and some of the more interesting ERIC documentary products are described. Finally, the ways in which high speed digital computers are and will be used, as well as the degree of mechanization of the system, will be covered.

# ERIC . . . A National Network to Disseminate Educational Information

HARVEY MARRON

THE ERIC PROGRAM is the only U.S. based national government information system which *by design* allows its subject experts to remain and grow in their chosen professional environments. The information products, services and tools are not generated by documentalists or information scientists but by subject oriented professionals working in the specific disciplines within education. Their documentary duties are adjuncts to their primary career thrust. This arrangement has two distinct advantages. First, the routine documentary products (abstracting, indexing, reference services, bibliographies, etc.) are of exceptionally high caliber. Second, the system facilitates the creation of special documentary products from newsletters through interpretive reviews and critical studies. Since these products emanate from professionals within the educational community, they are highly "targeted" and, therefore, much more likely to be responsive to the needs of a particular discipline. There are still other advantages to the decentralized network concept, which will be described in more detail later in this paper. But these very conditions which allow for the generation of high quality documentary products also give rise to several problems which are far from trivial. These also will be detailed later in this paper.

The objectives of ERIC revolve around the dissemination and utilization of informa-

tion. ERIC would not have been born without the high speed digital computer (and it would die immediately if the electric current failed). Insofar as mechanized techniques allow us to handle information faster, cheaper or better, we use them. We are not, however, interested in mechanization *per se*. Perhaps it is just a play on words, but I prefer to refer to ERIC as an information program utilizing mechanized techniques rather than a mechanized information program.

## System Description

The Educational Resources Information Center (ERIC) is a nationwide decentralized information system designed to help advance research and development on educational problems and processes and to accelerate



Harvey Marron is chief of the Educational Resources Information Center, Bureau of Research, U.S. Office of Education. This paper was presented on June 3, 1968 at a Joint Meeting of the Documentation Division and the Social Science Division during SLA's 59th Annual Conference.

widespread adoption of research-based educational programs. ERIC consists of four major interrelated components:

- 1) Central ERIC. Headquarters staff in the Division of Information Technology and Dissemination, Bureau of Research, USOE, is responsible for developing, managing and coordinating the system.
- 2) The network of 19 clearinghouses. Each clearinghouse focuses on a specific topic or field. Current clearinghouses are listed on pages 778-779.
- 3) An ERIC Facility, currently operated under contract by the North American Rockwell Co. (NR), to provide centralized document processing activities as well as computer, lexicographic and technical services. This contractor prepares the magnetic tape for the issues of *Research in Education* (RIE), the major abstracting and indexing publication of the Office of Education, as well as all other major output products which are computer generated using the ERIC files.
- 4) The ERIC Document Reproduction Service (EDRS) operated under contract by the National Cash Register Company, 4936 Fairmont Avenue, Bethesda, Md. 20014. EDRS sells the full text of documents cited in RIE at nominal cost.

Figure 1 is a simplified flowchart of the ERIC document processing system. Central ERIC is responsible for collection of final reports from all projects supported by the Office of Education and other federal agencies supporting research of interest to the educational community. Documents also are received regularly from the National Education Association, State Departments of Education, and many textbook publishers. Of major importance, however, are the documents acquired by the ERIC clearinghouses. Each clearinghouse is responsible for, and very actively pursues, the collecting of documents within its scope of interest from universities, professional organizations, individuals, or other sources productive of substantive documents pertinent to ERIC dissemination.

Once received, documents are reviewed by the clearinghouse subject specialists for quality and significance to education. Those selected are abstracted and indexed by assignment of retrieval terms from the ERIC Thesaurus. Résumés of documents (that is, abstracts, retrieval terms and bibliographic information) from all ERIC clearinghouses are forwarded to the NR facility on a standard résumé form where they are merged, stored on magnetic tape, and prepared for incorporation in RIE. The monthly issues of RIE are currently being sent to Government Printing Office (GPO) in the form of magnetic tape. GPO prepares the camera ready copy of RIE using the Linotron process of photocomposition and the issue is bulk printed and sold.

Copies of all reports cited in RIE (except for copyrighted items available only from the publishers) are forwarded to the ERIC Document Reproduction Service (EDRS) for microfilming and sale. Prices for documents are listed with each citation in RIE and they may be ordered from EDRS by their identifying numbers (assigned either by ERIC Central or by clearinghouse). Documents can be purchased in either microfiche or hard copy form.

Utilizing microfiche allows for full text dissemination at very reasonable costs. A standing order (purchase of all titles in a given document collection) costs 8.4¢ per fiche while individual titles cost 25¢ per fiche. The ERIC microfiche are produced to COSATI specifications. Hard copy (at about 70% of full size) costs 4¢ per page. Detailed ordering information is provided in each issue of RIE and in each index to special collections developed by ERIC.

## ERIC Products

ERIC products currently can be grouped into three classes. First RIE, which is the principal, continuing announcement bulletin for the report literature of education. All documents of significance added to the ERIC collection are announced through this publication. An abstract is provided for each document, along with the usual identifying information and author, institution and subject matter indexed. RIE also announces all

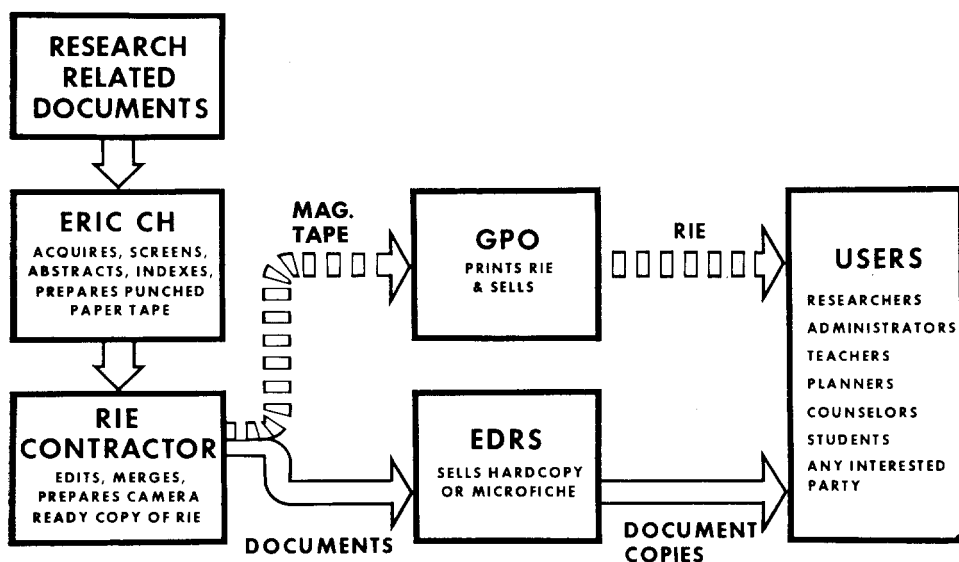


Figure 1. ERIC Document Flowchart

new research project awards made by the USOE and these are indexed in the same manner as reports.

The full text of most of the reports cited in RIE is sold by the EDRS in either microfiche or hard copy form.

ERIC also arranges for the distribution of document collections of special significance. Generally, a catalog containing abstracts and/or indexes announces the documents whose full text is available from EDRS in either microfiche or hard copy form. A list of these special collections appears on page 781.

Of major significance to ERIC's dissemination program are the publications of the ERIC clearinghouses. Each ERIC clearinghouse is responsible for the preparation of selected documents which range from newsletters to exhaustive research reviews.

### ERIC Clearinghouses

Selecting and processing documents for announcement in RIE is only part of the responsibility of the clearinghouses. The professional staff of each clearinghouse directs preparation of selective bibliographies, reviews of research and interpretative sum-

maries and often makes arrangements with those professional organizations most concerned to disseminate the material through professional journals, as part of national conferences, and through other existing communication channels. Major bibliographies and review papers developed by clearinghouses are put back into the system by announcement through RIE and are made available through the EDRS.

The clearinghouse products include—but are not solely confined to—newsletters, bulletins, research reviews ranging from relatively short to exhaustive, interpretive summaries, specialized bibliographies, and journal articles or monographs on topics within their area of their subject competence.

### The User Community

The ERIC system was originally envisioned, and continues to be, an information service program available to all segments of education. However, when one counts the total population encompassed by teachers, administrators, planners, supervisors, counselors and even students (that is, graduate and advanced undergraduate), the figure is



staggering. It is obviously not feasible for ERIC alone to be the direct service arm to the total potential user community, especially in view of the current budgetary and manpower constraints. We believe the information needs of education can best be served by a two-pronged attack. A first step is to maximize the distribution and the coverage of RIE and at the same time minimize the cost of the reports it cites. This will make the basic document collections as widely accessible as possible—both in terms of awareness and physical access—to organizations as well as individuals. (This same attitude will pertain to the announcement mechanism for the periodical literature currently being developed.)

Certainly the development of a comprehensive announcement service and an accompanying mechanism to acquire the full documents at reasonable cost are prerequisites for the widespread utilization and adoption of new ideas and practices in education. But we feel it is also critical to develop a multi-level set of resources and organizations to provide the more direct information and consultative services for the user community. Elements of this network, aside from ERIC, that may be built into such a system are:

- The 20 Regional Educational Laboratories, which are agents for installing new programs in local school districts.
- The 9 Research and Development Centers which have change-agent roles in

various facets of education.

- The 14 Instructional Materials Centers which assist those engaged in educational programs for the handicapped.
- The 56 State agencies whose change inducing responsibilities lie within their respective states.
- The many information, resources, and planning centers funded under various legislative authorities which are functioning as local "One-Stop" information centers.

In summary, ERIC can serve as a "wholesaler" of information products and services while the activities referred to above can be the "retailers" which can form the essential interface with the actual users of the products and services.

## Lexicography

A *Thesaurus of ERIC Descriptors*, now being sold by GPO, has been developed and is being continually expanded under the direction of Central ERIC staff. An overview of the lexicographic work in ERIC is maintained by the Panel of Educational Terminology (PET). Members of PET are drawn from Central ERIC, other government agencies, universities, professional societies, and ERIC clearinghouses. We are attempting to service the broad range of subject matter

## ERIC Clearinghouses

### *Adult Education*

Syracuse University  
Syracuse, New York

### *Counseling and Personnel Services*

University of Michigan  
Ann Arbor, Michigan

### *Disadvantaged*

Columbia University Teachers College  
New York, New York

### *Early Childhood Education*

University of Illinois  
Urbana, Illinois

### *Educational Administration*

University of Oregon  
Eugene, Oregon

### *Educational Facilities*

University of Wisconsin  
Madison, Wisconsin

### *Educational Media and Technology*

Stanford University  
Stanford, California

### *Exceptional Children*

The Council for Exceptional Children  
Washington, D. C.

### *Higher Education*

George Washington University  
Washington, D. C.

subsumed under education as well as under the specific needs of scholars in a circumscribed discipline with the single thesaurus. Recent experiences have given us cause to be optimistic that this approach will work.

Only established thesaurus terms may be used for indexing or for searching the ERIC files. Proposed new terms must be accompanied by a fully executed Descriptor Justification Form (DJF), and each candidate term is reviewed by a lexicographic team composed of subject and thesaurus specialists. The decentralized nature of the system requires a constant attempt to identify terminology overlap among the clearinghouses' points of view. The centralized lexicographic review and control provides the overall systems balance which may not always be easily accomplished at the individual clearinghouse level. Two aspects of the decentralized nature of ERIC pose special lexicographic problems. First, the wide scope of the subject matter calls for a plethora of descriptors, while systems or technical considerations require counter-restraints to keep the number from growing too large. Second, the wide range of interests and professional orientations of users force the indexer into difficult decisions on how to apportion the relatively few indexing terms allotted per document cited. The indexer may, for example, have to choose between index terms broad enough for the general educational community or very highly specialized ones for the scholars

in a particular sub-discipline. ERIC indexers, of course, attempt to do both but eventually operational or technical considerations force compromises.

Earlier, we thought that the generality of descriptors would not allow for precise retrieval. Happily, only few such difficulties have been encountered thus far.

### Decentralized System

ERIC is, at the same time, both a centralized and decentralized system. Unlike most of the large well-developed governmental information programs, ERIC does not gather all of the participating subject specialists into one building or even one contiguous area. On the contrary, contracts are made with organizations to operate clearinghouses only after they clearly demonstrated their *subject* capabilities. In effect, then, the subject-oriented personnel are encouraged to develop in their chosen professional fields. The subject competence in ERIC is, therefore, quite decentralized. On the other hand, every attempt has been made to centralize document processing, computer activities and management functions in either Central ERIC or the ERIC contractors.

Several advantages of this arrangement are:

- 1) The subject-oriented staff is encouraged to grow in its chosen professional environment;

---

#### *Junior Colleges*

University of California at Los Angeles  
Los Angeles, California

#### *Library and Information Sciences*

University of Minnesota  
Minneapolis, Minnesota

#### *Linguistics*

Center for Applied Linguistics  
Washington, D. C.

#### *Reading*

Indiana University  
Bloomington, Indiana

#### *Rural Education and Small Schools*

New Mexico State University  
Las Cruces, New Mexico

#### *Science Education*

Ohio State University  
Columbus, Ohio

#### *Teacher Education*

American Association of  
Colleges for Teacher Education  
Washington, D. C.

#### *Teaching of English*

National Council of Teachers of English  
Champaign, Illinois

#### *Teaching of Foreign Languages*

Modern Language Association of America  
New York, New York

#### *Vocational and Technical Education*

Ohio State University  
Columbus, Ohio

- 2) The specialized document collections at the clearinghouses are not fractionated but are built upon and enhanced;
- 3) The subject experts can be, and are, used for both documentation and analysis functions;
- 4) The centers of highly specific subject competence are encouraged to develop and are then available for consultation and professional guidance; and
- 5) The ERIC clearinghouses' professional staff provide excellent interfaces with specialized professional groups in education; since they are, first, members of their educational communities and, second, documentalists.

On the other hand the decentralized information program does have disadvantages, some of which are:

- 1) The lexicographic work (from descriptor generation through usage via indexing) is more difficult and laborious because of the extended lines of communication;
- 2) The costs for all operations, because of the decentralization, tend to be higher;
- 3) There is an increased possibility of simultaneous, duplicative processing by two or more clearinghouses;
- 4) It is difficult to maintain centralized bibliographic control over all of the clearinghouse satellite files (that is, material not incorporated in RIE but retained by the clearinghouses for local use);
- 5) The scarcity of information science or documentation experts makes adequate staffing at each of the clearinghouses especially difficult; and
- 6) Communication at all levels concerning schedules, guides, goals, etc. is difficult and requires a considerable allocation of staff resources.

### Mechanization

Earlier, I said that ERIC would cease to function were it not for the high speed digital computer—and so it would. Does

that make ERIC a mechanized system? Perhaps so, but the tasks presently being done by computer are more the housekeeping type, such as to assist in the acquisition program; establish management control over all documents in the system, prepare magnetic-tape for RIE, etc. But in the next several years, computers will occupy a far more significant role in terms of retrieval and services.

ERIC is now planning the development of an on-line, remotely accessed search system using the ERIC files as a data base. The aim is to allow any interested institution to interact with the ERIC data base, from any place in the country, or the world, using a commercially available communications system. Naturally, this is several years away but when the system is developed and in operation, ERIC will then truly deserve to be called a mechanized information system.

### Accomplishments

After some three years of operation, ERIC has:

- 1) Developed an announcement mechanism for the report literature of education (RIE) and made provision for ready, inexpensive access to the full text of reports (EDRS).
- 2) Established 19 clearinghouses, among whose responsibilities are the identifying and processing for announcement of significant documents in their subject specialties and the generation of "targeted" documents to defined user groups in education.
- 3) Prepared and disseminated several special document collections in areas of high interest and need.
- 4) Begun to mobilize the information dissemination forces in education to not only disseminate, but to utilize the information products, tools and services currently available.
- 5) Developed a thesaurus of educational terminology which apparently has been adopted as a world-wide standard.
- 6) Tested and tentatively shown the advantages and the workability of the decentralized information system concept.

## ERIC Catalogs

CATALOGS*	COST FOR COMPLETE COLLECTION ON MICROFICHE†
<i>RESEARCH IN EDUCATION</i> monthly abstract journal reporting newly funded research projects and recently completed research or research related reports of interest to the educational community. Contains abstracts of projects and reports indexed by subject, author or investigator, and institution. Single issues, \$1.75. Yearly subscription \$21.00 domestic, \$26.25 foreign.	Standing Order price for all documents will vary with each issue, but will be calculated at a rate of 8.4¢ per microfiche.
<i>OFFICE OF EDUCATION RESEARCH REPORTS, 1956-1965 RESUMES.</i> Abstracts of approximately 1214 research reports received by the Bureau of Research before the start of publication <i>Research in Education</i> . OE-12029 \$1.75.	\$280.00 for entire collection
<i>OFFICE OF EDUCATION RESEARCH REPORTS, 1956-1965 INDEXES.</i> OE-12028 \$2.00.	
<i>ERIC CATALOG OF SELECTED DOCUMENTS ON THE DISADVANTAGED, NUMBER AND AUTHOR INDEX.</i> OE-37001 \$0.65.	\$230.00 for entire collection
<i>ERIC CATALOG OF SELECTED DOCUMENTS ON THE DISADVANTAGED, SUBJECT INDEX.</i> OE-37002 \$3.00.	
<i>PACESETTERS IN INNOVATION, FISCAL YEAR 1966.</i> OE-20103-66 \$2.50.	\$100.00 for entire collection
<i>PACESETTERS IN INNOVATION, FISCAL YEAR 1967.</i> OE-20103-67 \$2.50.	\$120.00 for entire collection
<i>SELECTED DOCUMENTS IN HIGHER EDUCATION, NUMBER AND SUBJECT INDEX.</i> (Available from the ERIC Document Reproduction Service.) ED 012 110 \$3.24 (HC) or Microfiche \$0.25 (MF).	\$115.00 for entire collection
<i>RESEARCH IN EDUCATION, 1967 ANNUAL INDEX, REPORTS</i> \$3.25.	\$370.00 for the entire collection
<i>RESEARCH IN EDUCATION, 1967 ANNUAL INDEX, PROJECTS</i> \$1.50.	
<i>RESEARCH IN EDUCATION, SEMI-ANNUAL INDEX, JANUARY-JUNE 1968 REPORTS</i> \$3.75.	\$490.00 for entire collection
<i>THESAURUS OF ERIC DESCRIPTORS.</i> OE-12031 \$2.50.	
<i>THESAURUS OF ERIC DESCRIPTORS. SUPPLEMENT NO. 1,</i> OE-12031-1 \$2.00.	
<i>MANPOWER RESEARCH: INVENTORY FOR FISCAL YEARS 1966 and 1967.</i> OE-12036 \$2.75.	\$60.00 for entire collection

\* Above catalogs available for sale from: Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402.

† Individual titles on microfiche are \$0.25 per card. All documents are also available in facsimile hard copy reproduction at \$0.04 per page. Microfiche Collection may be ordered from: ERIC Document Reproduction Service, National Cash Register Company, 4936 Fairmont Avenue, Bethesda, Maryland 20014.

7) Begun to develop an announcement mechanism for the periodical literature of education.

### Future Plans

While we will attempt to improve all aspects of the activities we have underway, there are some areas which will get special attention in the next several years.

*First*, we will stress the development of the one-stop information centers. Their roles will include:

- 1) development and maintenance of front-line document collections;
- 2) analyzing, synthesizing, interpreting, and selectively disseminating information;
- 3) promoting the installation of new practices, and
- 4) providing "feedback" to the initiators of information services and products for their guidance.

*Second*, ERIC will actively pursue the development of an on-line, remote access search system to bring the ultimate user into closer proximity with the document collection. *Third*, the ERIC clearinghouses are being urged to turn their energies toward information analysis and timely generation of interpretive summaries or digests which can be readily used by the practitioner. *Fourth*, there has already developed a strong interest in acquiring the ERIC files on magnetic tape. Should this demand continue—even in view of the

plans to develop an on-line, remote access system—arrangements will be made for their systematic dissemination.

### ERIC and Special Librarianship

The kinship between ERIC and special librarianship is already strong, and it will continue to strengthen. There are at least three obvious manifestations of this relationship:

- The *Thesaurus of ERIC Descriptors* has helped organize the language of education for document handling and control purposes.
- ERIC is generating products and services of great potential value to education at many levels.
- Special librarians may now directly assist the vast user community by transforming ERIC services and products into beneficial results.

There is, however, another aspect to the liaison of ERIC and special librarianship, which while subtle is even more exciting. ERIC's approach to information dissemination makes the special librarian part of the system. ERIC expects the special libraries to do more than merely house our products. ERIC wants the special libraries to purvey information. Librarianship of the highest caliber will be required. This is our challenge and our opportunity.



The advent of computers for library work has intensified the previous resurgence in printed catalogs. This paper discusses the historic reasons why printed catalogs of library holdings tended to disappear in the early 20th century, and how computer-based catalogs overcome (or do not overcome) the problems of older printed catalogs. A cloudy view of the future is presented.

# Printed Catalogs: Retrospect and Prospect

ESTELLE BRODMAN and DORIS BOLEF

THE LATE 19TH AND EARLY 20TH CENTURIES saw the flowering of printed catalogs and also their decline. The mid-twentieth century, on the other hand, has seen their resurgence—a resurgence brought about under the belief that the reasons for the decline of the printed catalog had somehow been overcome by the computer. Today, however, there are voices crying aloud that the computer has not solved the fundamental reasons for the decline of the printed catalog; that, indeed, the true causes for the decline were not those emphasized by present-day computer enthusiasts, but were an entirely different set, having nothing whatever to do with the technical capabilities of computers or the limitations of printing devices. In the view of these people, we may be attacking the wrong problem at the wrong time. According to them, the present emphasis on printed catalogs by computers could be a begging of the question and might lead to serious disappointments and frustrations. It is this dichotomy of feeling which we propose to discuss in this paper.

## History of Printed Catalogs

We should start, perhaps, by asking what were the purposes of printed catalogs? They are well set forth in the prefaces of many such catalogs printed in the United States

between the Civil and the Spanish-American Wars, and occasionally in other places as well. Since this was the era of the extension of public libraries, we may expect that our greatest font of information would be the printed catalogs of such institutions, and this is indeed true. But as medical librarians, we may be forgiven for calling your attention to John Shaw Billings, first librarian of what is now the National Library of Medicine and first editor of the *Index Catalogue*, who discussed this problem, among others, in his many writings.

Printed catalogs were produced originally in the 16th and 17th centuries (hand-written ones had served up to that period) primarily in monasteries, which were required to present inventories of all their possessions to Rome at intervals, sometimes annually, but more often at lengthier intervals. Thus the first reason for printed catalogs was to satisfy a legal or fiscal responsibility. Inventories of libraries of estates for inheritance and tax purposes are another example of such productions.

Secondly, printed lists were produced for sales purposes, as anyone will testify who has struggled through catalogs titled "The collection of the late so-and-so, to be sold at the such-and-such auction house on this date," as will the antiquarians among us who have studied the early *Messkataloge* of the German Book Fairs.

Sometimes, too, catalogs of personal and institutional libraries were produced for vanity purposes—a sign of conspicuous consumption—to show how rich the owner was, to have been able to gather together such treasures. The catalog of the King's Library at the British Museum is such a list.

Very often, moreover, a library catalog was the culminating proof of the scholarship of the sinecure-librarian entrusted with the care of some ducal or princely collection—and sometimes today, looking at certain complicated catalogs, a question arises whether or not we are still at that stage now!

And finally, the printed catalog was produced to show those at a distance what was available to them in a particular library. Mudies, the famous lending library of Victorian and Edwardian England, which lent books by post throughout the country—and for which so many 3-volume romantic novels were written—needed some means of informing its country subscribers of what was available for borrowing. So Mudies produced a printed catalog—as did the early subscription libraries in the United States. Like the Sears Roebuck catalogs, these library lists became favorite reading for all members of the family.

As mentioned earlier, fundamental changes were taking place in libraries during the 19th Century, due to the rising tide of literacy resulting from the Industrial Revolution. This brought in its train the establishment of the Mechanics Institutes at the beginning of the century, and the Carnegie Public Libraries, land-grant college libraries, specialized collections, and a slowly-gathering increase in numbers of books produced by the end of the century. All this seriously affected the purposes both of libraries and of their printed catalogs. No longer were libraries the domain of the royal and leisure classes, who could be flattered into maintaining or contributing to a library collection by beautifully produced printed catalogs that recorded their munificence for posterity. No longer were librarians in a position to devote years to the production of exquisitely turned-out catalogs, secure in the knowledge that changes in the collection would be so few that such a catalog would reflect that collection for years to come.

## A Book Catalog in Every Home?

The librarians of the latter half of the 19th century, quite sensibly, adapted the printed catalog to the changing library scene. They attempted not to put a chicken in every pot, but a library catalog in every home. They reasoned that with the democratization and spread of books and learning from the smaller upper classes to the emerging larger middle classes, with their deep concern for improving their lot in life, the printed catalog, available as it was to all comers, would be a welcome helpmate. For that reason, Victorian libraries accepted the burden of finding the necessary time and expense to produce printed catalogs. This was one more element in their recurrent drives to popularize and increase the usage of their libraries. In 1876, for example, Justin Winsor, librarian of the Boston Public Library, wrote "the printing of a catalogue is a great expense to a library, but it is a necessary one for a popular library."<sup>1</sup> To all, it seemed obvious that the printed catalog would affirm the democratic character of the libraries producing and distributing them, and that once the technological problems and obstacles were overcome, readers would welcome them wholeheartedly. Experience was just the opposite. The popularity of the printed catalog declined steadily. It is ironical that the printed catalog, which would seem to be a logical element of this new mainstream of public education, attracted only a small portion of the public, and librarian after librarian tried to modify the printed catalog to make it more attractive to readers. Ranz<sup>2</sup> has summarized this trend very well.

What, after all, are the advantages of the printed catalog over a card catalog? Firstly, a book catalog is portable and reproducible in many exact copies. Numerous copies can be placed at many locations and distributed to branches and individuals. Secondly, many people can use it simultaneously.

Thirdly, gifts to the library can be solicited by the use of attractive book catalogs mentioning the donors by name. The printed catalog also eliminates the need for peripatetic catalogers and filers in large library systems. Finally, it is easier to use. The eye can far more quickly scan a page of entries and

compare them than the hand can riffle through and the eye can comprehend a file of cards.

On the other hand, what are the disadvantages of the printed catalog as compared with the card catalog? For one thing, it can never be completely up-to-date. The card catalog can reflect the day-to-day additions, changes and deletions of a particular library collection, thanks to its infinite intercalation feature. Further, as libraries increase in size, the cost of producing larger printed cumulations becomes prohibitive, so that supplements rather than cumulations must be offered. As a result, as the libraries continue to increase in size, the user has to look through more than one printed catalog instead of searching at one point in a card catalog.

Despite the valiant efforts of Winsor and his contemporaries, the printed catalog movement lost its momentum because the masses of people who were just beginning to use libraries did not want them. They were willing neither to purchase such printed catalogs, even at a fraction of their actual cost, nor to accept them free of charge. Obviously such catalogs did not satisfy the needs of this new class of library users; the printed catalogs did not give them whatever it was they wanted.

What are some of the possible reasons for this rather surprising lack of popularity and rejection of printed catalogs? Probably no single reason can be adduced; rather a number of reasons produced a synergetic effect. For one thing, most library patrons were members of one library, and they had, therefore, one printed catalog available for use. They could not choose between the "wares" of two libraries. Not only were they limited to the use of one collection but these collections were usually not mail order houses. With certain exceptions, such as libraries for the blind, very few lending li-

braries in this country mailed books to their patrons. Instead, the library patron had to present himself physically at the library in order to borrow his books. Whether or not he possessed a book catalog at home was therefore of little moment. Usually he did not want a specific book anyway but a class of books, and if one were not immediately available, another one would do equally well. Even if the books he wished to borrow were listed in the printed catalog, moreover, there was always the possibility that someone else had borrowed them just prior to his visit. (Remember this was before the era of the telephone.) He would then have to arrange to borrow the books on his next visit. Besides, even if he had only a cursory acquaintance with his library, he knew what kinds of books, on what subjects, and from which point of view, he would be likely to find there. A printed catalog would not prove useful for the largest group of books that the user would expect to find in the library; it would prove useful only for the books in the borderline areas, about which he was not certain.

Lastly, if the patron wished to use the printed catalog for bibliographic purposes, he would find it not up-to-date, and incomplete both in content and in bibliographic detail. Most 19th century book catalogs used abbreviated bibliographic entries to save printing costs. Besides, most public libraries were quite small and incomplete, and there was a danger in relying on it for bibliographic completeness. In the preface to the first volume of the *Index Catalogue of the Library of the Surgeon-General's Office*, Dr. John Shaw Billings made this quite clear. He wrote, "In conclusion, permit me to call attention to the fact that this is not a complete medical bibliography, and that anyone who relies upon it as such will commit a serious error. It is a catalogue of what is to be found in a single



Estelle Brodman, Ph.D. is librarian and professor of medical history, School of Medicine, Washington University, St. Louis, Missouri. Mrs. Bolef is deputy librarian of the School of Medicine. Their paper was presented at the Second General Session on Jun 3, 1968 during SLA's Conference in Los Angeles.





collection, a collection so large and of such a character, that there are few subjects in medicine with regard to which something may not be found in it, but which is by no means complete." This was written in 1880 about a library that was already one of the largest and most important in its field in the world. If this could have been written of the Surgeon-General's Library (now the National Library of Medicine), how much truer would this have been of other, lesser libraries?

### The Situation Today

Now that we have set the historical stage, let us turn to the present. The recent resurgence in interest in printed catalogs did not come about because of any sudden need that manifested itself. Rather, it came about because the computer, which has captured the imagination of the library community, can easily be adapted to produce printed catalogs, and librarians assumed—as did our 19th century predecessors—that users needed and wanted them. As a result, libraries across the nation have experimented with and produced many excellent computer produced catalogs. For example, we in St. Louis have proved (along with many others) that it is feasible, that it can be done. Just because we can do it, however, does not mean we should. Now we must ask ourselves if we should continue. Our experience with users is painfully like that of Winsor and Cutter and Poole. Readers do not seem to want the catalogs, even when they are free. To produce these catalogs is expensive and time-consuming. We must, therefore, make certain that they serve a useful purpose, that they do indeed facilitate the use of our libraries. As we say in our library, "Good Lord, keep us from doing efficiently what doesn't need to be done at all." The previous experience that libraries have had with printed catalogs is not encouraging, and it behooves us to see if conditions have changed sufficiently to warrant a return to the old system.

The immediate reason (as opposed to the proximate cause) for the abandonment of printed catalogs was the prohibitive cost, especially as increases in cataloging entries required larger cumulations. Is the cost for

producing computer printed catalogs today any more or less than the cost of traditionally printed catalogs yesterday? Our brief foray into the world of computer-produced printed catalogs, and a comparison of our experience with other libraries, lead us to believe that the costs, although they may be for different things, are just as great, on the whole. Whereas formerly the costs were for time required to write out the entries, for the typesetting, for the checking of the galleys, and then for the printing, gathering and binding, now the costs are for preparing the original input, programming (including debugging), loading the data into the computer, sorting it, printing it out in one copy, and then finding a suitable method to reproduce it in many copies. In the end, it comes to the same thing. Since the cost of producing the original data is the same under each system—for, as is obvious, the same human being must do this today as did it before computers—we must compare the two methods from that point onward. If we do this, we find that what we have done in computer catalogs is to use a modern speedy, powerful, and comparatively cheap machine to prepare a result which must then be further manipulated by a technique developed in Renaissance times and not changed appreciably since then. The reference, of course, is to printing and binding, although it is conceded that printing by photo-offset is faster and cheaper than printing by hot type.

All this may be worthwhile, however, if the results justify the costs. But do they? Our own experience leads us to think that in certain circumstances, at any rate, they may not. It is pertinent now to examine the question of why readers do not wish to use printed catalogs, and this will be divided into use within the library and use at a distance.

### Who Will Use Them?

Like Bergson, we do not believe there is only one explanation; there are only explanations, and one of them is the cultural lag. People today are not used to getting information from a printed catalog, and it is natural for them to prefer a system they are familiar with to one they must learn. Second, the advantage of portability and use at a

distance—as opposed to the static quality of the card catalog—is less important now than it was in earlier years, since the telephone makes it possible for a user somewhere else to obtain the information quickly and easily when he is not physically present. Third, the copying revolution, which has probably transformed libraries today more completely and more subtly than any other single device in the last 200 years, this copying revolution makes it possible for a reader to obtain what he wishes to use without even coming to the library. A telephone call will tell him whether the library has something and will also bring a copy of it to his desk without further ado. The general public library user, on the other hand, as we mentioned before, is usually not interested in a particular item so much as in a general class of items—novels, biographies, histories of a war, for example—and for him any one of a group of items is equally useful. Such a person in an open stack library hardly needs a catalog of any kind or description to satisfy him. Besides, as all the evidence seems to indicate, the use of public libraries as a general educational device has been going down precipitously in all parts of the country. People are not using any public library catalogs, card or printed, because they are not using libraries.

Together with the disadvantages of printed catalogs, which were mentioned before, the factors just enumerated, have resulted in a general tendency for many printed catalogs to be produced and not used.

### Education or Re-education

It may well be that we should devote more time and attention to educate our library users in the ways of printed catalogs and all of the other newer library services that are being introduced. It may well be that we should also educate ourselves as to what our library users really want. As one example, a group of cancer and heart specialists in Chicago were recently provided with a new, and probably very expensive, information service connecting The John Crerar Library with six Chicago hospitals by direct wire facsimile machines. According to the announcement which appeared in *Library Journal*,<sup>3</sup> only

one-third of the specialists used this service more than once. What the significance of these findings for the future may be is still unclear.

We have been talking up to now of printed catalogs used outside the library quarters. What about the use of printed catalogs within the walls of the library itself? The results reported in the literature are equivocal; some tell of enthusiastic reception and others of dislike. In order to collect some data in at least one situation, we are going to make a trial (only hesitatingly could it be called an experiment) to see what will happen if readers are given no alternative to the printed catalog.

Beginning in September 1968 and for four months, the Washington University School of Medicine Library will hide its card catalog for the period covered by the contents of its printed catalog. (We will put it in a locked room in the stacks, and we will continue to maintain it, so we can use it again if our trial shows the desirability of returning to a card catalog.) We will scatter around the library copies of the printed catalogs, which will be supplemented by a small card file of those titles received since the appearance of the last monthly cumulated printed catalog. We will try to keep tabs on the comments, difficulties, and surprises encountered by staff and readers in using the new set-up, and in six months or so we will try to determine the actual worth of printed versus card catalogs in our setting. It is impossible even to guess what the results will show, but we are willing to accept whatever they do reveal and to act on it one way or the other.

Nor are we the only ones examining this subject anew. The Yale University Library recently announced the start of a two-year study to investigate the feasibility of replacing its card catalog with computers. It will be of interest to us to see whether the conclusions recommend the replacement of the card catalog with printed or other catalogs, with other substitutes made possible by computers, or not to replace the card catalog at all.

The other thing we have not discussed here is the printed catalog as a union catalog. Again, the picture is unclear. Would a TWX

query or other long-line query of either a card catalog or an unprinted computer store of bibliographic data be preferable to a printed catalog? Hopefully, someone will do some work on this question and help us come to some conclusion about what we should do in the near future.

### Facts on Format

As the great Baltimore psychiatrist, Adolph Meyer, once said, "The difficulty is not that people don't know anything, but that so many people know things which are not so." We have been working too long on a *priori* knowledge, and now we need to gather the real facts. When we have the facts and have pondered their significance, perhaps we can determine what forms of catalogs are suited to our changing and increasingly disparate array of libraries. Our studies may lead us to consider other forms—neither card nor printed—of which we are as yet quite unaware. The more sophisticated computers and

computer networks and the newer photo-reproduction methods will certainly encourage additional experimentation in catalog making. They may show us which methods of presenting this material are best suited for these newer purposes. What are the paths that we should take? How do we adapt the existing methods to our present needs? In all of this we need always to be certain that our commitment to a particular format is tempered by real evidence that these forms do indeed serve a useful function in the communities served by our libraries.

### References

1. Proceedings [of the Philadelphia Conference of the American Library Association, 1876], Sixth Session. *Library Journal*, v.1: p.31 (Nov 1876).
2. RANZ, Jim. *The Printed Book Catalogue in American Libraries: 1723-1900*. Chicago, American Library Association, 1964. Chapter 5.
3. Medical Information Service Spurned by Doctors. *Library Journal*, v.93: p.1846 (May 1, 1968).

• • •

# Evaluation of Special Library Service for Upper Management

MARTHA BOAZ

TO EVALUATE LIBRARY SERVICES for upper management one must first know the place of the library in an organization. The position of the library within an organization should be determined by the ultimate goals for service. The position of the library will vary from one organization to another, depending on the nature of the work and the channels of communication. A library may serve an entire company; it may serve only one department; or, it may serve various divisions of an organization. The size and type and field of interest of the organization—as well as the degree of emphasis on research—will affect the type and extent of services of the library.

Various criteria have been listed, from time to time, in attempts to evaluate library services, but these criteria are often vague, diffuse, and meaningless. Prior to the establishment of criteria there must be a thorough understanding of the purpose of the library, its program, functions and services within the total system.

An organization can be described as a system of human relationships. Within an organization people are related to each other in different ways, in what may be called a subsystem. There may be a multiplicity of subsystems at various levels in the total organization. To be truly effective, all jobs must be integrated into one functional entity to accomplish the objectives of the organization. Each subsystem must contribute to the whole and each is evaluated by its cost and by its benefits. Generally speaking, each subsystem is expected to increase its productivity and at the same time lower its cost of operation.

One method for establishing criteria is through the systems approach which can be variously defined but it is usually described as a program or design with the steps or

operations involved in carrying out the design. The concept of what is frequently called "systems analysis" is an important one and should be applied to libraries as one of the first steps in evaluating a library and its services.

## Interrelations and Discoveries

Systems analysis is concerned with how well each part of the system and subsystem is interrelated with all the others. The purpose of systems analysis is to study the mechanism of a system, to discover all the factors involved in its operation and to locate the problem areas. After the study has been made, plans should be set up for improving the present system or for designing a better one.

Systems analysis, applied to library operations, shows a step-by-step sequence of events and when changes are planned or made, the interrelationships and results can be shown, in a factual presentation, to management. The most frequent procedure in systems analysis is to examine existing systems. It is suggested that this method may be restrictive. It is hoped that new systems will not be limited by the constraints of existing ones.

An additional definition of systems analysis is given by Burton E. Lamkin:<sup>1</sup> "Systems

*SLA's Insurance Division heard this presentation by Dr. Boaz at its meeting on June 5 in Los Angeles. Martha Boaz is Dean and Professor, School of Library Science, University of Southern California.*

analysis is a step-by-step organized process used to analyze programs, procedures and problems in a logical order." He continues: "The extent to which systems analysis can be used in a library depends on the librarian's attitude. However, if you are not aggressive in applying systems analysis to your operations, management may do it for you." Lamkin also points out the need for communicating the library's problems, ideas, goals, and plans to management.

### A Creative Process

The systems approach is a creative process. This theory is included in Marvin Adelson's<sup>2</sup> list of major characteristics of the system approach which he says are: (1) organized, (2) creative, (3) empirical, (4) theoretical, and (5) pragmatic. Adelson says the system approach is an *organized* way of attacking a problem domain; usually a team of skilled and professional people attempt to understand what is happening and what might be made to happen. He adds that creativity is involved, for the outcome of the system approach is dependent on the people who do the work and the resources available to them. Since great reliance is placed on data, the system approach is *empirical* in nature, for the needed data includes not only facts but information on the practices, attitudes, interactions and other characteristics of the organizations which influence the system. The theoretical approach, as well as the empirical, must be involved and where formal theories or models are lacking, they should be developed by persons who are able to produce them. The system approach is *pragmatic* in that it is action-oriented and should have results which are useful in a world of practical affairs.<sup>2</sup>

An important factor in the systems framework is what Elmer B. Staats calls "anticipation." And this, he says, requires us to create within ourselves the desire to find time in our schedule to think. "Tomorrow's executive must not only capably handle the traffic of administration but also make adequate provision so that his policy machinery stays several lengths in front of the problem of next year and the years to come."<sup>3</sup> Staats warns against the crash program as being

"usually a palliative, both expensive and wasteful. . . . Answers are wanted without excessive reliance on the panic button."<sup>3</sup>

### The Value of Systems Analysis

In planning, the librarian must know the values of the use of "systems analysis" or "systems planning" which uses "cost effectiveness" as a major criterion. Thus the administrator will have clearer ideas of choices and better bases on which to make decisions; he will also have ways of measuring results against planned objectives.

Systems analysis, through a collection of data and presentation of facts, provides librarians with a tool by which they can improve performance and communicate with top management. Successful communication implies good rapport among staff, high level service to library users, and the support of management for library programs.

Precise facts are important when one is trying to influence management's attitudes and opinions. Hence it is important when one is trying to formulate standards and establish criteria to have a systems analysis procedure which defines jobs, streamlines methods, eliminates unnecessary or overlapping operations, outlines new methods, identifies relationships, integrates programs, collects cost-value information, and communicates with top management.

One specific application of systems analysis is time and motion studies. These studies evaluate workload performance and productivity. Burton Lamkin explains that "Equations for library functions reflect manpower needs based on the number of units processed or received. These workload statistics are collected as a by-product of operations activities."<sup>1</sup> Lamkin goes on to suggest that library programs should be translated into costs and this information conveyed to top management, for the language understood by top management is cost versus effectiveness or value as it affects profit.

Top management uses facts to make decisions. Top management finds it difficult to measure library services. Top management often wants to know how much the company library is used. Top management is interested in whether or not the librarian is re-

sponsive to the needs of the organization; whether his recommendations are sound, whether his decisions are based on facts or emotions, whether or not he is improving the performance of the library.

### Management's Responsibility to the Library

The company or organization has a responsibility to keep the librarian informed of new plans and developments and of plans for the future. The librarian should be invited to attend management meetings in order to know the objectives of the organization, the plans, problems and needs of management and of all the company employees. The purpose of this involvement of the librarian is that he can be of assistance in assembling pertinent information. Various types of materials may be examined by the librarian for information about current work and about new fields of interest. The librarian, by following up on leads and by supplying management with articles, clippings, bulletins, books, reference services, translation services, photocopying services, literature-search materials and other items can encourage management to keep him informed. The librarian has a responsibility to keep management informed about what is available. The best collections are of little value unless those who need them know they are available.

In order to overcome lack of communication, the librarian, in addition to the above, can provide traditional services to employers and employees such as daily news briefs, weekly abstract bulletins, listings of new materials received in the library, reproductions or tables of contents of selected journals, memos to individuals who have special interests. The librarian must have initiative and imagination in developing the library's program. The methods used in finding and conveying information are important. Within a company it is important to know what kinds of information are needed and how to go about getting this information. One way to determine the type of information needed is through knowledge of what the executives are reading. In addition it is important to know the needs, desires, and reading habits of all users of the library.

### Qualities Needed by Librarians

The librarian must possess qualities of dissatisfaction, restlessness and curiosity. He must be interested and enthusiastic about his work. He must be friendly, cordial, gracious and helpful. The public relations angle is important. Many librarians are introverts. It is interesting to note that the atmosphere in most libraries is not one of "all-out" friendliness and service. Perhaps librarians should take lessons from businesses which exist in a competitive environment.

A library should serve management and the library users as though in competition with another library—and as though the library would be disestablished if it could not measure up. One method for improving services is through automation. Many businesses are now using computers to improve communication and accelerate work. Some business libraries are using computer time-sharing as a means for providing services. The complexity of modern business requires information not generally available in one organization. Yet decisions must be made and somehow the information has to be assembled, for the cost of failure is high. It follows that efficient information retrieval is mandatory. The librarian must face the growing passion for facts and information on the part of top management. Libraries will be responsible for collecting refined data and for its analysis and interpretation.

In the foreseeable future computers and libraries will be joined together in nationwide and worldwide networks. There will be outlets in offices and private homes. Libraries should not only be ready but should be in the forefront in the planning of this future. After the goals are established, programs are planned, channels of communication are established, then specific criteria for services can be clear-cut and definite.

### References

1. LAMKIN, Burton E. Systems Analysis in Top Management Communication. *Special Libraries* v. 58: (no. 2), p.92-93 (Feb 1967).
2. ADELSON, Marvin. The System Approach: A Perspective. *Wilson Library Bulletin* v.40: (no. 3), p.711-715 (Mar 1968).
3. STAATS, Elmer B. The Government Manager in 2000 A.D. *Wilson Library Bulletin* v.40: (no. 3), p.707-708 (Mar 1968).

With the increase of federal assistance programs calling for comprehensive planning in all areas, the need for planning literature has expanded and is continuing to grow. Indiana's answer to this demand for an extensive, easily accessible collection of planning information is the Planning Division Library. The functions of the library, its organizational structure and services are described. The compilation of a basic bibliography of planning publications was developed as an aid to planning commissions and nascent libraries.

# Indiana's Planning Library: An On-Going Process

CYNTHIA F. STOOTS

THE PLANNING DIVISION LIBRARY was established in 1965 when the Planning Division became an official part of the Indiana Department of Commerce. This special reference library is designed to facilitate research in state, local and regional planning in Indiana and related activities. The primary function of the library is to serve the staff members of the Planning Division, and secondly, the Indiana Department of Commerce. Facilities are provided in the library for non-employees of the Division of Planning who desire to use library materials. These materials must be used in the library, however, during library hours.

The work of the division is divided into three sections: Administration, Local Planning Administration, and State Planning. The Local Planning Administration Section performs three activities: "701" program administration, technical services, and planning advisory services. The "701" program administration is concerned with assisting local communities in establishing and strengthening planning programs. This program received its name from Section 701 of the Housing Act of 1954 which it administers.

The technical services activity is involved in an experiment of nationwide importance that may ultimately expand this program to be the largest in the division. Currently, the technical services consist of comprehensive planning programs being prepared for three small Indiana towns. Future expansion could

include advisory assistance to planning commissions and preparation of comprehensive plans for sewer and water facilities for more than sixty counties.

Through the planning advisory services, the division is actively involved in planning education at all levels of community development. Publication of a quarterly newspaper and brochures, acting as the host for planning conferences and seminars, and preparation of visual presentations for public meetings are among the many essential services performed by this activity.

The State Planning Section is charged with the responsibility to develop and maintain a comprehensive state-wide plan. Present activities in this section include a delineation of planning regions for the state and studies of both inter- and intra-governmental coordination.

The library as part of the research facilities is administratively a part of the Administration Section. The variety of information needs within the division (as noted by the short descriptions of each section) necessitated the development of a variety of library services.

## Functions

In endeavoring to better serve the planning staff, the reference service function was developed. Assistance is given to staff mem-

bers, other state agencies, local planning commissions, and others in the use of sources and in literature searches. Annotated bibliographies are often compiled to fill information requests. This research of literature, however, often goes beyond the library collection to call upon the extensive collections of the Indiana State Library, the Indianapolis Public Library, and special libraries in Indiana.

A second function of the library is to promote the development of other special libraries. Because of the needs of local planning offices for reference information, assistance is readily available to all agencies wanting to develop library service within their organizations.

Library communication, a third function, is constantly kept open between the library and its patrons and between the library and other libraries. A weekly library bulletin of recent acquisitions is distributed to staff members, libraries, and other interested persons, upon request. This listing includes the publisher and price to enable local agencies to obtain their own copies more easily. Although a library handbook was originally published and distributed so that staff members would better understand library operations and use, the handbook has also aided local agencies in understanding the needs and contributions of a special library.

Finally, the library endeavors to keep informed of the nature, subject, and development of staff projects so that the collection will reflect the needs and interests of the division. Special research assignments for the near future are discussed with the librarian. Materials are then acquired so that they will be available when the project is to begin. An example of how extensive this research can

be is the recent acquisition of planning legislation from all 50 states. The library now has on file city, county, regional, metropolitan and state planning legislation for each state. Also included in this collection is the enabling legislation and laws of the states concerning the organization of Council of Governments and interlocal cooperation.

## Holdings

Library holdings currently include more than 2,000 cataloged books and pamphlets. The publications contain all facets of the field of planning with related socio-economic works. Special emphasis is placed on acquiring general information about Indiana, though the Indiana Section of the Indiana State Library is an excellent source for research. *Indiana State Statutes* as well as *Burns Annotated Indiana Statutes* aid research into Indiana legislation. Federal legislation concerning laws and programs of particular interest to the division are acquired.

Federal documents occupy an important place in the special library of a governmental agency. Publications concerning Indiana, subscription services to works on population, economics and industry plus free materials comprise the larger extent of this collection. The number of federal documents is purposely kept small because the State Library is a depository of federal publications. Acquisitions of federal materials are mainly quick reference materials or information that is used frequently.

To supplement the cataloged materials, special files are maintained. The vertical file contains 1,000 publications arranged by subject headings. The publications placed in this file are either free or inexpensive, small in size, and in paperback form. Other criteria for placing materials in this file are the amount of use they will receive and their importance. Special files also are maintained for Indiana cities and towns and Indiana counties.

The library currently receives 125 periodicals. Most of these are indexed in the *Public Affairs Information Service Bulletin*. Incoming magazines are checked for pertinent information pertaining to research projects.



*Mrs. Stoots is research assistant for the Planning Division of the Indiana Department of Commerce. While librarian for the Planning Division Library (1966-1968), she organized and developed the library system described.*



Periodical articles as well as new books are directed to staff members who have indicated an interest in one particular subject. The periodical collection is arranged alphabetically by title. All old issues are being kept until the research need of such issues is determined.

Library holdings are further developed through an aggressive acquisition program. An adequate budget has enabled the library to take advantage of special services offered by various national organizations. One of the best known in the field of planning is: *American Society of Planning Officials Planning Advisory Reports*. Published monthly, each issue is an entire report on one subject in the field of planning and zoning. A recent service of particular interest to planning agencies is the *Urban Affairs Reporter*, published by the Commerce Clearing House. This three-volume set furnishes information on federal government programs affecting state and local governments. The many federal programs for grants, loans, and technical and other assistance available to local governmental bodies are included—as selected with the advice of the consulting organizations. Programs and rules in these areas, whether established by Congress through legislation or by federal executive agencies, are within the scope of reporting.

The classification system being used is the system adopted by the City Planning and Housing Library\* in New York City, with modifications to fit our own needs. This system was selected because the major divisions were specific—to break down our needs into select groups—and yet were general—to allow for growth and necessary changes. The system has flexibility to permit new major headings to be developed as new areas within the field of planning are opened.

The federal documents are being cataloged by a special classification system developed especially for our library. The publications are classified first according to the issuing agency and then by title. This system conforms to the series enumeration developed by the U.S. Bureau of the Census for their publications. The document collection is too extensive to be included in the general cata-

logging system; and, yet, it is too small to use one of the more advanced and detailed systems of cataloging documents as used by larger libraries.

Vertical file subject headings generally follow the subject headings used in the card catalog. Currently, there are 70 major subject headings with 30 subheadings. Information concerning cities, incorporated towns, and counties in Indiana are filed in a special section in alphabetical order. This separate filing system was devised to facilitate "701" planning.

The Planning Division Library endeavors to keep abreast of the new developments in library service through such organizations as the Indiana Chapter of Special Libraries Association and the Council of Planning Librarians. With the aid of professional organizations such as these, the library seeks to assist the Planning Division and other agencies achieve their objectives. Planning is an on-going process. To serve such a field, the library must be an on-going process too. By being constantly alert to new ideas and developments, library service continues to grow and improve.

## Basic Bibliography for a Planning Library

### General

- Area Development Department. *Planning Primer*. Northern Natural Gas Company, 1962. 61p.
- Beck, Ned. *Getting Your Plan Commission Organized*. Bloomington, Indiana University Division of Community Planning, 1967. 48p. Free.
- Bestor, George C. and Holway R. Jones. *City Planning: A Basic Bibliography*. Sacramento, California, Council of Civil Engineers and Land Surveyors, 1966. 195p. \$3.00.
- Goodman, William I. and Eric A. Freund, eds. *Principles and Practice of Urban Planning*. Washington, International City Managers' Association, 1968. 560p. (Available Spring 1968 —new edition of *Local Planning Administration*)
- Miller, Harold V. *Mr. Planning Commissioner*. Chicago, Public Administration Service, 1954. 81p. \$1.00.
- Mumford, Lewis. *The City in History: Its Origins, Its Transformations, and Its Prospects*. New York, Harcourt, Brace, and Company, 1961. 672p. \$11.50.
- Stein, Clarence S. *Toward New Towns for America*. Cambridge, M.I.T. Press, 1966. 263p. \$2.95.
- Urban Land Institute. *The Community Builders Handbook*. Washington, 1968. 526p. \$20.00.
- Webster, Donald H. *Urban Planning and Municipal Public Policy*. New York, Harper and Bros., 1958. \$8.00.

\* The City Planning and Housing Library is part of the Municipal Reference Library which, in turn, is part of The New York Public Library.

## Administration

- American Society of Planning Officials. *Code of Ethics*. Chicago, 1962. 4p. Single copy free.
- Council of Planning Librarians. *Planning Agency Library Manual*. Eugene, Oregon, 1964. 39p. \$5.00.
- Moak, Lennox L. and Kathryn W. Killian. *Capital Budget Manual*. Chicago, Municipal Finance Officers Association of the United States and Canada, 1964. 152p. \$6.00.
- Phillips, Jewell Cass. *Municipal Government and Administration in America*. New York, Macmillan, 1960. 648p. \$6.95.

## Land Use and Zoning

- Bair, Frederick H. *The Text of a Model Zoning Ordinance*. Chicago, American Society of Planning Officials, 1966. \$2.00.
- Beuscher, J. H. *Land Use Controls—Cases and Materials*. Madison, The College Printing and Typing Company, 1964. 577p. \$10.95.
- Chapin, F. Stuart. *Urban Land Use Planning*. Urbana, University of Illinois, 1965. 498p. \$7.95.
- Guttenberg, Albert Z. *New Directions in Land Use Classification*. Chicago, American Society of Planning Officials, 1965. \$2.50.
- Haar, Charles M. *Land-Use Planning: A Casebook on the Use, Misuse, and Re-Use of Urban Land*. Boston, Little, Brown and Company, 1959. 790p. \$11.00. Supplement 1966. 84p. \$2.00.
- Housing and Home Finance Agency. *Suggested Land Subdivision Regulations*. Washington, U.S. Government Printing Office, 1962. 68p. 50¢.
- Mandleker, Daniel R. *Managing Our Urban Environment, Cases, Text and Problems*. Indianapolis, The Bobbs-Merrill Company, 1963. 1003p. \$13.50.
- Rody, Martin J. and Herbert H. Smith. *Zoning Primer*. West Trenton, N. J., Chandler-Davis Publishing Company, 1960. 48p. \$1.00.

## Plan Elements

- Bartley, Ernest R. and Frederick H. Bair, Jr. *Mobile Home Parks and Comprehensive Community Planning*. Gainesville, University of Florida, 1960. 147p. \$3.00, paper.
- Branch, Melville R. *Transportation Developments, Cities, and Planning*. Chicago, American Society of Planning Officials, 1965. 29p. \$5.00.
- Burrage, Robert H. and Edward G. Mogren. *Parking*. Saugatuck, Connecticut, Eno Foundation for Highway Traffic Control, Inc. 1957. 401p. Free.
- Butler, George D. *Introduction to Community Recreation*. New York, McGraw-Hill Book Company, 1959. 577p. \$7.75.
- Kostka, V. Joseph. *Neighborhood Planning*. Winnipeg, Manitoba, Appraisal Institute of Canada, 1957. 143p. Free.

- National Committee on Urban Transportation. *Better Transportation for Your City: A Guide to the Factual Development of Urban Transportation Plans*. Chicago, Public Administration Service, 1958. 96p. \$5.00.
- Public Administration Service. *Developing the Transportation Plan*. Chicago, 1964. 89p. \$4.00.
- Urban Land Institute. *The Homes Association Handbook*. Washington, 1966. 422p. \$10.00.

## Urban Design

- Lynch, Kevin. *The Image of the City*. Cambridge, Harvard University and M.I.T. Presses, 1960. 194p. \$5.50.
- Lynch, Kevin. *Site Planning*. Cambridge, M.I.T. Press, 1962. 248p. \$10.00.
- Spreiregen, Paul D. *Urban Design: The Architecture of Towns and Cities*. New York, McGraw-Hill Book Company, 1965. \$12.50.
- Urban Renewal Association and Bureau of Public Roads. *Standard Land Use Coding Manual*. Washington, U.S. Government Printing Office, 1965. 111p. 50¢.

## Economics

- Pfouts, Ralph, ed. *The Techniques of Urban Economic Analysis*. West Trenton, N. J., Chandler-Davis Publishing Company, 1960. \$5.00.
- Thompson, Wilbur R. *A Preface to Urban Economics*. Baltimore, Johns Hopkins Press, 1965. 413p. \$7.50.
- Tiebout, Charles M. *Community Economic Base Study*. New York, Committee for Economic Development, 1962. 86p. \$1.50.

## Periodicals

- The American City*. (monthly) \$7.00/year. Buttenheim Publications, New York.
- American Society of Planning Officials. Planning Advisory Service Reports*. (monthly) Membership provisions. Chicago.
- Journal of the American Institute of Planners*. (bi-monthly) \$8.00/year. American Institute of Planners, Baltimore.
- Journal of Housing*. (11 issues/year) \$8.00/year. National Association of Housing and Redevelopment Officials, Washington.
- Land-Use Controls: A Quarterly*. (quarterly) \$100.00/year, includes *Zoning Digest*. American Society of Planning Officials, Chicago.
- Pratt Planning Papers*. (quarterly) \$3.00/year. Pratt Institute, Brooklyn, N. Y.
- Public Management*. (monthly) \$4.00/year. International City Managers' Association, Chicago.
- Traffic Quarterly*. (quarterly) Free. Eno Foundation for Highway Traffic Control, Inc., Saugatuck, Connecticut.
- Urban Land News and Trends in City Development*. (monthly) \$35.00 per membership per year. Urban Land Institute, Washington.

## The Library-ization of Computers

BEFORE THE WORKSHOP PARTICIPANTS quite knew what was happening to them, they had turned into knowledgeable and convinced believers in "Giant Nincompoops," Ray Stanish's term for analog and digital computers. From then on—all voiced in the new jargon—queries, suppositions, and schemes for the future were rampant at the *Library-ization of Computers Workshop* held at the University of Colorado, Boulder, Oct. 28-30, 1968.

The workshop was sponsored by the Colorado Chapter of Special Libraries Association, the Colorado State Library, and the Bureau of Continuation Education at the University of Colorado. The workshop was designed to provide a basic orientation to the concepts and terminology of computer operations, to look at library computer systems used in Colorado, and to explore opportunities for continuing education in library automation.

The cross section of 154 Colorado librarians (academic, public, school, and special) learned that practical uses of computers in libraries were indeed close at hand. A tour of the IBM installation near Boulder showed those, who were willing to walk, the intricacies of computer production, operating computer centers, and computer applications in the IBM library. Small group discussions with those who had actually mastered in some degree the "Giant Nincompoops" revealed projects already launched including a university serials book catalog, a public library acquisition system, a special library current awareness program, and a computerized information center for public school teachers and administrators.

Into the whirl of thoughts Maryan E. Reynolds (State Librarian of the Washington State Library) poured such comments as: the use of automation requires more and better cooperation among librarians than ever before, but strikingly greater service to the public will almost certainly result from use of computers. Charles H. Davis (Director of Systems at the ERIC Clearinghouse on Retrieval of Information and Evaluation of

Reading and Research) predicted that there will be a change from librarian-oriented computer service to user-oriented service in the future. He also thought that there would be a major need for education in information science in the future.

A lively panel discussion on continuing education posed such questions as: What is it? Who should do it? What should be included in it? And, should it be done at all? For the last question there was an overwhelming *Yes*. The others drew more fragmented responses, with new questions piling up in abundance.

So that the participant could go home with something readily applicable to his own situation even without a computer, Charles Austin (Director of Computer Services at the University of Colorado Medical Center) gave an excellent introduction to systems analysis which was followed by small groups discussing applications in diverse kinds of settings.

At the final session, participants asked for more information about existing automated systems in Colorado, computer program resources, local automation experts, and possible funding sources for library automation projects. The question of how librarians could gain support of management for automation projects was raised. School librarians felt they should meet to study their own needs. Further continuing education including all kinds of librarians was requested. The recommendation was made that the Colorado Plan for Library Development be re-evaluated and strengthened.

Just as the rock 'n roll music which persisted in creeping into the auditorium from a student gathering nearby, so computers are creeping into our library lives faster than we think. Perhaps we may as well embrace and make use of them.

MRS. VIRGINIA BOUCHER  
Head, Interlibrary Loan Service  
University of Colorado Libraries

## Gutenberg, Frankfurters and IFLA

IN 1468 JOHANNES GUTENBERG DIED. In the same year—exactly 500 years ago—the first international book fair was held at Frankfurt am Main. Thus, place and time (Aug 18-24, 1968) chosen for the 34th Session of the General Council of the International Federation of Library Associations (as the annual IFLA meetings are called officially) were highly suitable and significant. Nobody could suspect that, for the second time in IFLA history,\* this meeting would be marred by political overtones. But, Frankfurt is just some 150 miles away from the Czech border, and the Czech incident was therefore of deep concern to our hosts. We must say that all went remarkably well: professionalism ruled the sessions, political discussions were generally avoided, and the demonstrations of some 5,000 students did not disturb the business of the convention. Its orderly progress was helped greatly by two factors: the smoothest organization and the best meeting rooms we have had in a long time. The site of the meeting, the City and University Library, is a highly functional new building; convention office and registration desk were easily accessible and well staffed. The hospitality extended to the visitors by all three levels of government—federal, state, and municipal—as well as by the library associations of the Federal Republic of Germany was lavish, from a banquet at the "Römer" (where the emperors of the Holy Roman Empire of the German Nation were crowned in days gone by) and a reception at the candlelit Goethehaus, to a wine tasting in medieval Eberbach Monastery and to the traditional Rhine journey.

The theme of the session was *Books and Libraries in an Industrial Society*. Following a welcome extended by the Minister of Education and the Lord Mayor, the President of IFLA, Sir Frank Francis, Director and Principal Librarian of the British Museum, reviewed the activities of the past 5 years during which, "within the framework of a long term programme" (as set out in IFLA's *Libraries in the World*, The Hague, 1963), IFLA has consolidated its position as "the accepted international forum for the dis-

cussion of a very wide range of library matters." Sir Frank stressed particularly the progress achieved in the establishment of cataloging principles, in the fields of shared cataloging and of union catalogs, in the study of the legal instruments governing public libraries, in the re-appraisal of library education, and in many other respects. The Rector of the University, Prof. Dr. Walter Rüeegg presented a very long and deep paper on the "basic written structure of the industrial world," which I strongly recommend to every librarian for intensive study.† The weary listeners were revived by a witty and challenging talk of J. E. Morpurgo of the National Book League (London). He called it the business of books and libraries to create "an aristocracy of readers to which all men have the possibility of climbing," and in general, proved to be a fine Jeffersonian. These two papers were complemented by Dr. V. Orlov's (USSR National Public Library for Science and Technology, Moscow) less fundamental and more technical discussion of *USSR Technical Libraries in the Nationwide System of Scientific and Technical Information*.

### Section of Special Libraries

On Wednesday morning, the Section of Special Libraries (SLS) got into the act, and with some éclat. The morning session saw the approval of the *Statutes* and the election of officers. Dr. V. Orlov was elected vice president; Martin Romeiss, Battelle Institute, Frankfurt became secretary-treasurer; Mrs. Galina Matveyeva, All-Union Library of Foreign Literature, Moscow, Donald Mason,

---

\* The first occasion was 1939 when, in view of the activities of the National Socialists in Germany, Godet expressed, at an IFLA Council Meeting, his doubts as to the possibility of free international cooperation. See: L. Brummel, *The International Organisation of Librarianship*, translated by Karl A. Baer, Washington, National Housing Center Library, Feb 1965.

† *Books and Libraries in an Industrial Society*. To be published in *Libri*.

Imperial Chemical Industries, Dyestuffs Division, Manchester, and Erik Spicer, Library of Parliament, Ottawa, are the new directors.

The further development of *INSPEL* (International Newsletter of Special Libraries) was discussed at length. Its future policies are to be determined by a mail vote of the members of the Section.

A series of papers on the organization and support of special libraries, with particular stress on their bibliographic activities, had been initiated at the 1966 IFLA meeting at The Hague. It was continued with E. J. Coates' (British Technology Index, London) excellent presentation on *The Computerization of the British Technology Index*. He fielded questions more successfully than I could, following my reading (in the author's absence) of a paper on *MEDLARS, A Multipurpose Information System*, by F. W. Lancaster (National Library of Medicine, Washington, D. C.). A report by Marc Chauveinc (Bibliothèque Universitaire, Grenoble) on *Subject Bibliography in France* was read by title.

The afternoon session was a joint meeting with the Committee on Bibliography (CB). The president of SLS reported on the common goals of the two groups and came to the conclusion that world-wide effective activity in the field of subject bibliography will come about only "by the cooperation of agencies of a general character such as FID, IFLA, and UNESCO, and of a more specialized nature such as IGU, IAU, and ICSU,\* on the basis of the establishment of computer compatibility in individual subject fields and of international input and output agreements". In the absence of Dr. Chubaryan, the chairman of the Committee, its secretary, Dr. Gerhard Pomassl read an address prepared by Dr. Chubaryan. His plans call for a gathering of reports on bibliographic activities from all over the world (most of these have already been submitted) for publication in a collective volume, and for a future coordination of bibliographic efforts on the basis of an expert study based on these preliminary enterprises.† It may be said that SLS and CB pursue the same aims of making all bibliographical tools readily available to everybody, everywhere; but, there are differences in emphasis as well as in the methodological

approach—and in the more guarded optimism shown by SLS.

Papers presented during the afternoon session included Arthur Gropp's (Pan-American Union, Washington, D. C.) *Bibliographical Activities of Special Libraries in Latin America*, the essential part of which is a comprehensive bibliography of bibliographies compiled by libraries and documentation centers from 1950 to 1964 (462 entries), and which fills a definite need. Mme. Galina Matveyeva (Moscow) discussed the bibliographic activities of a library which—to my knowledge—has no parallel elsewhere (that is, the All-Union Library of Foreign Literature); as such it deserves special attention. Dr. Heinz Siegel (German Patent Office, Munich) had prepared a collection of "material and examples" illustrating the wide scope of bibliographic publications of special libraries in the Federal Republic of Germany (more than 600 entries); this *Selective List of Special Bibliographies* which includes 1968 publications and is complemented by various indexes (no subject index, unfortunately) should prove a valuable reference tool for special librarians everywhere. Dr. G. Reichardt (Nuclear Research Establishment, Jülich Federal Republic of Germany) added some remarks that turned out to be observations of basic importance demonstrating that "the special bibliographies are the true international bibliographies," and that they are "the ones that show the international state of science," to the benefit of all. Eighty-five persons attended the meeting of the Section.

### Astronomy Subsection

On the same day on which the Section met, the Subsection of Observatory and Astronomical Societies Libraries had their own well attended meeting. Under the chairman-

---

\* IGU, International Geographic Union; IAU, International Astronomical Union; ICSU, International Council of Scientific Unions.

† In this connection a paper by Henryk Sawoniak, *The Necessity of a Truly Universal Current Bibliography of Bibliographies*, is of particular interest. This paper (like all the papers read before the SLS) will appear in *INSPEL* (Jan 1969).

ship of the president, Mme. G. Feuillebois, a discussion of the Report of the Meetings of Commission 5 on Documentation of the International Astronomical Union at Prague (1967) led to an explanation of the relation of that Commission to the Subsection. The completion of a far advanced bibliography of non-commercial astronomical journals by Mme. Van de Poll de Lange was voted, and this list should be published and available by now. There was also a thorough debate of the new preliminary version of the UDC in the field of astronomy.

A description of the Library of the Observatory at Rome was presented by Mme. G. Grassi Conti; she stressed the outstanding rarities of the collection and its special classification system.

An excursion to the Landessternwarte Königstuhl (the state observatory) at Heidelberg brought closer personal contact among the participants; they also inspected, among other things, the computer center (Rechen-Institut), where *Astronomischer Jahresbericht* is produced.

The Subsection has been so successful that a similar group of geography and map librarians is now in the formative stage. In that field, an analogous situation—the existence of an International Union where librarians have no “standing”—calls for an analogous development; it is hoped the charter meeting of the new group will take place in 1969.

After a respite on Friday, when we visited the Gutenberg Museum at Mainz and followed an invitation of the Government of Hessen to Kloster Eberbach, Saturday's Consultative Committee and Plenary Board Meetings approved, among other things, the resolutions taken by Sections and Commit-

tees. Of particular interest: The Committee on Periodicals and Serial Publication decided to complete and publish in 1969 the *Bibliography of National Directories of Current Periodicals*. A working party of the Section of Parliamentary and Administrative Libraries (headed by Dr. K. Peters, The Hague) will investigate the problems of the international pooling of current information on the basis of comprehensive bibliographic control. Several committees resolved to investigate problems of standardization in their respective areas of interest, partly in cooperation with ISO-TC 46.

Last and most importantly, a far-reaching plan for reorganization of IFLA was presented to the Consultative Committee and to Plenary Session by Vice-President Dr. Herman Liebaers. The reorganization would largely restrict the Executive Board to administrative activities and make the Consultative Committee the “leading body within IFLA to deal with professional problems”. The number of sections would be reduced to three, namely, National and University Libraries, Public Libraries, and Special Libraries. These sections would enjoy considerable autonomy and include existing sub-sections. Discussion of these almost revolutionary changes had to be postponed until next year. The 1969 meeting is scheduled to take place in Moscow September 15-21—hopefully, under more peaceful world conditions.

KARL A. BAER, Chief Librarian  
National Housing Center  
Washington, D. C.

SLA Representative to IFLA  
President, SLS-IFLA



# National Advisory Commission on Libraries Report Submitted to President Johnson

THE LONG-AWAITED report of the National Advisory Commission on Libraries has now been submitted to President Johnson. The report, "Library Services for the Nation's Needs: Toward Fulfillment of a National Policy," was transmitted to the President on October 3 by HEW Secretary Wilbur J. Cohen in his role as chairman of the President's Committee on Libraries. Later—on October 15—the report was formally presented to the President by the commission's chairman, Dr. Douglas M. Knight (president of Duke University) and by two members of the commission, Verner W. Clapp and Dan Lacy. It is reported\* that the presentation took place in a very brief ceremony at 5:30 p.m. in the President's Office in The White House. Although Mr. Johnson made an informal acceptance statement, his message was not recorded and no press release was issued.

On the day of adjournment (October 14) of the 90th Congress *sine die* (until January 3, 1969), the commission's report was inserted into the record† by Representative Carl D. Perkins of Kentucky (chairman of the House Education and Labor Committee) and by Senator Wayne Morse of Oregon (chairman of the Senate Educational Subcommittee).

BOTH THE President's Committee on Libraries and the National Advisory Commission on Libraries had been created by Executive Order on September 2, 1966. In addition to the HEW Secretary as chairman of the committee, other members of the committee are the Secretary of Agriculture, the director of the Office of Science and Technology, and the director of the National Science Foundation; the Librarian of Congress was invited to be a member of the committee.

The commission's report had been sent to the chairman of the committee on July 1, 1968. In the October 3 letter of transmittal to the President, Mr. Cohen wrote that his committee had found the commission's report to be "highly stimulating"—apparently so stimulating that Mr. Cohen found some vintage phrases for his description of libraries. He wrote:

"Libraries are the keepers of our history and our culture. But they are not merely storehouses for the relics of the past, but meeting places for people and ideas, vital partners in our system of education."

One could have hoped for a broader 20th-century description of libraries from HEW, because the ultimate operational focus of the Commission's recommendations‡ is within the Department of Health, Education, and Welfare by: 1) establishment of a central Federal Institute of Libraries and Information Science (in HEW); 2) establishment of a permanent

National Commission on Libraries and Information Science (in HEW); and 3) re-inforcement of the library-oriented activities already in the U.S. Office of Education.

Without a more enthusiastic endorsement of the commission's report, one may well wonder why President Johnson's remarks were not recorded for posterity. But, Mr. Cohen alone is not to be faulted.

The total library community may feel that the commission's report is a major accomplishment because so many library problems have been assembled into one official document.

When "privately supported research libraries" are mentioned, the context suggests an endowed library, public or quasi-public, rather than the special libraries of both profit and non-profit organizations.

It is unfortunate that this otherwise comprehensive report of the National Advisory Commission on Libraries does not present an adequate statement of the position of special libraries in American society—especially their positions as unique nodes in the information transfer process for specialized groups of information users. There is also no hint that the work load of the public, university and na-

---

\* *ALA Washington Newsletter*, v.20: no.11 (Oct 28, 1968)

† *Congressional Record* (Extensions of Remarks), v.114: (no.173) p. E 9355-68, E 9373 (Oct 21, 1968)

‡ The complete recommendations are reprinted on pages 833-834.

tional establishments would be multiplied manifold if the special libraries did not exist.

## BOOK REVIEWS

Perhaps, some introspection by SLA is indicated. Are the words, *special library*, meaningful only to ourselves? Perhaps there is no satisfactory answer to the question. Should we, nonetheless, examine ourselves with the eyes and ears of an outsider? What does *special* mean to the outsider?

The special library community, on the other hand, may well wonder why it is essentially invisible in the commission's report—although the report lists a study that was contracted by the commission.\* Phrases such as, "public agencies and private institutions and organizations," occur in the report but with no indication that special libraries exist in such organizations, nor that such special libraries provide the first level of information service—and frequently the total information service—for the employees of such agencies and organizations.

The National Library of Medicine is described as a specialized library serving "a defined group—in this case the medical scientists and practitioners." There is no hint of the special libraries (in biomedical research institutes, in hospitals, or in the pharmaceutical industry) who are most often the information bridge between NLM and the biomedical scientists throughout the nation.

In 1969 Special Libraries Association enters its sixtieth year, but SLA itself has not yet developed its own adequate definition of a *special library*. Where are the brave ostriches who will shake the sand out of their eyes and ears and who will face up to the need for a definition of a special library that is understandable and brief?

FEMCK

\* Among the special studies listed in Appendix B of the report is one titled, "Special Libraries: Problems and Cooperative Potentials." It is expected that copies of the special studies will be available from ERIC at a later date.

The complete report of the National Advisory Commission on Libraries is reprinted on pages 813-839 of this issue of this journal.

U.S. OFFICE OF EDUCATION, *Survey of Special Libraries Serving the Federal Government*. Washington, D. C., Government Printing Office, 1968. (Office of Education publ. no. 15067), 75 cents.

Statistics [groan], statistics [?] is a possible shorthand for expressing a prevalent ambivalence towards the value of statistics in general, and of library statistics in particular. Even so, the Office of Education is to be commended for this publication which compiles and summarizes the data collected in early 1966 by its National Center for Educational Statistics. The survey covered 437 federal special libraries, an estimated 86% of the category which was defined to exclude federal quasi-academic or school libraries (those serving federal educational activities) and quasi-public libraries (those serving general recreational or non-formal educational purposes, such as military posts). The data are based on the responses provided in a specially devised questionnaire form, with definitions, which is appended to the text.

Effective data collection, in any field, requires as a minimum: 1. Carefully designed questions which reduce ambiguity of response; 2. Reasonably complete, or at least statistically representative, coverage of an identified and defined community; and 3. Input from qualified sources within the defined community. The OE survey meets these requirements creditably as compared to many other library statistical surveys. This is said somewhat reluctantly; not that I wish to damn with faint praise, but rather that I believe that the quality of library statistics in general leaves much to be desired.

It may come as a surprise to some outside of the federal community that a well designed survey within this limited, as defined, area can still produce results which are incomplete and ambiguous in certain respects. Interestingly enough, this opinion is borne out by a recent U.S. Army contract study\* in which the con-

\* U.S. ARMY, PICATINNY ARSENAL. *Criteria for Evaluating Effectiveness of Library Operations and Services. Phase II. Data Gathering and Evaluation*. (Army Technical Library Improvement Studies Report no. 19) Aug 1968, p.49. (Available from CFSTI, Springfield, Va., AD 676 188)



tractor reviewed the statistics provided by the same 10 Army technical libraries in response to 5 surveys, beginning with the Brookings Institution survey of 1959. The report says: "... Thus, it is difficult to judge the accuracy of the data, even with on-site inspection." These few words seem to epitomize the state-of-the-art within library statistics.

Yet, these subjective judgments aside, this survey provides a useful and informative arrangement of data, including: a directory of libraries responding, graphs of historical data concerning holdings, staff, and division of effort to fulfill the major library functions, such as, acquisitions, processing, and services.

The major contributions of two SLA members, and former OE staff members, Dr. Frank L. Schick and Robert J. Havlik, towards the design, implementation, and compilation of survey results, should not go unnoted. The expertise of these individuals, and others like them, will be needed to assist the American Library Association in developing its proposed National Plan for Library Statistics.

LOGAN O. COWGILL, Chairman  
SLA Statistics Committee

Water Resources  
Scientific Information Center  
U.S. Dept. of the Interior  
Washington, D. C.

SCHICKELL, EDWARD H. *Bookplates for Libraries: Contemporary Designs for School, Public, College and University Libraries*. Austin, Texas, Roger Beacham, 1968.

*Bookplates for Libraries* is a somewhat unassuming book but with warmth and elegance. All designs are original—made exclusively for this book by the artist and calligrapher, Edward Schickell. Libraries may use any of the designs without permission. Most of the plates are readily adapted for use by a special library. By using only one plate a library can recover more than the cost of the book. The 78 plates are printed in four colors especially mixed for this publication. The title page was hand set in Centaur designed by Bruce Rogers. Each plate is identified as to the particular type style used, and an index is included of the various type faces utilized. A valuable reference book for library bookplates. Pre-publication price of \$9.95 until Jan 30, 1969; after that date

\$12.95. Publisher: Roger Beacham, P.O. Box 8254, Austin, Texas 78712.

E. WITH-PATRICK  
Transinfodex  
New York, N. Y.

MIKHAILOV, A. I., CHERNYI, A. I., and GIL-YAREVSKII, R. S. *Osnovy informatiki* (Fundamentals of Informatics). 2d ed. of *Osnovy nauchnoi informatsii* (Fundamentals of Scientific Information), 1965. Moscow, Izdatel'stvo "Nauka" (Science Publishing House), 1968. 756p. Kamkin's Book Store, Washington, D. C.

Hailing "informatics" as a new scientific discipline, the enlarged new edition of this reference work takes a world view of the development and present state of the discipline. Traditional methods of bibliographic processing, including classification, abstracting and indexing are reviewed, and their inadequacies against the increasing speed and bulk of scientific research and its reporting in print, are discussed as an introduction to the modern advances in methods and machines. Computerized documentation, codes, machine languages, language translating machines, replication, thesaurus aids, and other contemporary problems are discussed. Finally, the state of the art in the USSR is compared with that in Western Europe and the United States. The book is well illustrated and indexed; there is an 8-page bibliography. Any information scientist having even a smattering of Russian can find a wealth of information in its 9 chapters and supplements.

DR. JULIAN F. SMITH  
Hickory, North Carolina

#### CORRECTION

In the November issue of *News & Notes* (page S-49) two names and addresses were interchanged. Please note the following corrections:

*Publishing Division Bulletin*, Editor  
Paul Di Mauro  
Scott, Foresman, and Company  
Glenview, Illinois

*Sci-Tech News*, Send Orders to  
Laura Rainey  
North American Rockwell Corp.  
Science Center  
1049 Camino Dos Rios  
Thousand Oaks, California 91360

## LETTERS

### *Not Only for Specials*

Mr. Bromberg's curriculum proposal for special librarianship (*Special Libraries*, Oct 1968) presents an extremely interesting course of study which successfully pinpoints the needs of a science-oriented special librarian. It is not so successful in convincing me that special librarians are that special. I would like to see *every* librarian exposed to the kind of content he proposes in his courses on Psychology of the User; Publishing; Acquisitions, Book Selection and Weeding; Control of Library Materials; Abstracting and Indexing; Library Administration; Professional Attitudes; and Fundamentals of Library Mechanical Tools. Not everyone would need so intensive a course in Government as a Vendor, although many would; not everyone would need the advanced reference course (Little Used and Non-Conventional Library Reference Tools) but many would. The Practicum, presumably, would be tailored to individual needs in any case.

So what we have here is the current basic pattern of library education: a "core" of courses that everyone should take, with some electives for special concentration in the student's chosen specialty. What Mr. Bromberg has done is to re-arrange the content in a challenging and constructive way which is worthy of consideration by the designers of curricula for a variety of library specialties, not just that of the special librarians.

LESTER ASHEIM, Director  
Office for Library Education  
American Library Association  
Chicago, Illinois 60611

### *Vital for Moderns*

The library school curriculum proposed by Erik Bromberg to educate for special librarianship is excellent. The approach is imaginative, breaking almost completely with the traditional program. Several items appear which I have for sometime considered as vital to a modern course of study: fundamentals of library mechanical tools and non-conventional library reference tools. A few key words stand out as I read his list: negotiating the reference question, weeding, systems analysis. Is there a better way to learn cataloging and reference than practice in a real situation as proposed in Item 10 (The Practicum)?

Certain portions of this curriculum are not peculiar to special librarianship (see Sections

4-10); in fact, public and university librarians could benefit.

The major advantages of this program would be two: the capable, intelligent prospect would be attracted to library school, and the resulting product would be immediately useful in the special library environment.

ELIZABETH W. KRAUS, Head Librarian  
Research Laboratories  
Eastman Kodak Company  
Rochester, N. Y. 14650

### *SDI and the Gatekeeper*

Selective Dissemination of Information (SDI) was originally defined by Hans Luhn as "That service within an organization which concerns itself with a channeling of new items of information, from whatever source, to those points within an organization where the probability of usefulness, in connection with current work or interests, is high."<sup>1</sup>

The concept of SDI, judging by the literature, is replacing the Information Explosion as the subject of greatest professional appeal. Many programs are described in detail, usually with flowcharts, and the general impression is that extra points are scored if the system involves a computer. This is understandable, since the original concept was defined by a specialist in electronic data processing.

If a system is designed as a problem in data processing, it will have given characteristics. If it is examined from the viewpoint of the final user, however, its meaning may have to be reshaped. The criteria of successful SDI programs should not be mechanical.

We feel as librarians that we are the primary source of information. But in R&D industries, the library is a secondary source for channeling information: the most comprehensive study of the pattern of information flow shows that the library is the first source of information less than 10% of the time.<sup>2</sup>

Engineers and scientists do not use the library when they need information. They use instead the 5-10% of the staff who are expert in their fields. These people are the technological gatekeepers in the information process. They are defined as "... people to whom others turn to for technical discussion and consultation, and who, in turn, report having a greater amount of contact with the professional and scientific literature or with technically trained friends outside the lab."<sup>3</sup>

The gatekeepers know a great many people, and are curious about what is going on. They read a lot, they go to conferences, and they

know their counterparts in other companies. More importantly from the point-of-view of the librarian, they use the library intelligently, regardless of the rules and/or hazards placed in their way by librarians, information specialists, or system designers.

This type of person will use the classical SDI program, one which cites exact documents in the form-fitting categories, a program which has been designed with careful attention to the percentage of hits, degree of relevancy, and the accuracy of the citations. This program will save a great deal of time, and so is valuable. But most of the sources are normally checked by him, and he would find the articles and reports by himself. He follows the state-of-the-art carefully. SDI, for him, is essentially a back-up.

For the technological gatekeeper, an expanded concept of SDI would be more valuable. A loose program, one which risks bringing the gatekeeper junk, trivia, and irrelevant material, would also bring him material which he will not ordinarily come across. He will not object to useless material, since it is a part of his personality to do his own refining. He desires fresh material, and any program which brings him the unique will be considered beneficial. A loose program will answer his unofficial interests, and this is what he cherishes. This important fact is ignored in the official definition of SDI: *people's interests do not follow an exact profile*. Half of what they read could well be outside their subject specialty. They do not, many times, know what they are looking for.

There are actually two aspects of SDI. The majority of reported programs follow the official definition, being essentially state-of-the-art reviews. They stress accuracy in following interest profiles. They present what is immediately and officially applicable. They answer specific questions. They are extremely valuable to the average engineer.

But the unusual engineer requires a looser program. Inaccuracy of an intelligent kind will actually extend the SDI concept, for the gatekeeper will find unexpected treasures. He will become part of the dissemination program himself, referring these "irrelevant" documents to the people who need them. This material will also spark his bolt-from-the-blue solutions. This is the material which can justify an aggressive library system.

In a creative SDI system, the document is something other than the subject of assigned key words. While the document can be mechanically processed, at some point someone intelligent—preferably human—should actu-

ally look at the material and ask, "Who would be interested in this?" The answer will be the name of a gatekeeper if the document is in any way unusual. It should be the function of the library to match the documents with the gatekeepers.

An SDI program which cooperates with the technological gatekeepers becomes doubly effective, for it becomes a two-stage program. The gatekeepers know what is going on in the organization at a technical level the librarian cannot be expected to attain, just as the librarian knows sources of information the engineer would never realize. More than this, the gatekeepers know the people the librarian never sees, those unfortunate engineers who are afraid or distrustful of libraries. The gatekeepers can work for the library, becoming "the librarian for the non-users."

An SDI program, if it is to be effective, should bring out material which an engineer would not normally be able to find for himself. While it is true that engineers generally do not understand libraries, and do not know how to look up information, most SDI programs only do the routine at great expense, in the hope of saving the engineers' time, and to make up for the engineers' weaknesses in literature searching.

SDI is supposed to channel information. In research and development organizations, this channeling has been the function of the technological gatekeeper. SDI, as constituted, is an attempt to create a mechanical gatekeeper. A creative SDI program should find, regularly, information which would not normally be found by a diligent, experienced user. To be truly successful, SDI must be supplemented by resourcefulness and imagination. Providing these is the function of the librarian.

DON DORRANCE, Librarian  
The Bendix Corporation  
Aerospace Systems Division  
Ann Arbor, Michigan 48107

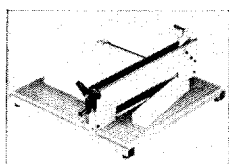
1. LUHN, Hans Peter. Selective Dissemination of New Scientific Information with the Aid of Electronic Processing Equipment. Presented at the 126th Meeting of the American Association for the Advancement of Science, Chicago, Ill., Dec 29, 1959. IBM, Yorktown Heights, N. Y. Rept. 225-1488.
2. NORTH AMERICAN AVIATION. *Final Report DOD User-Needs Study. Phase II. Flow of Scientific Information within the Defense Industry. Volume III A. Frequency Distributions and Correlation.* Table 2-13 (AD 649 284).
3. ALLEN, Thomas J. and COHEN, Stephen I. *Information Flow in an R&D Laboratory.* Alfred P. Sloan School of Management. Working Paper No. 217-66, Aug 1966, p.23.

## HAVE YOU SEEN ?



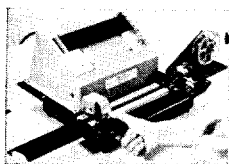
A high style chair which also stacks and gangs (without visible fasteners) has been announced by Domore. **Libra I** has a rectangular steel tubing frame with polished chrome surface. The shell seat is injection molded in one piece of high impact strength ABS plastic (Cyclocac).

Available in six molded-in colors: white sand, black, dark olive, leather tan, royal blue, and brick red. A specially designed dollie holds a maximum of 42 chairs. Each chair weighs approximately 10 pounds. **Libra II** with arms is a companion chair. Available through: Domore Office Furniture, Inc., Elkhart, Indiana 46514.



A new portable paper cutter is capable of cutting up to 200 sheets in one clean stroke. It will handle paper stock up to 12 inches. The hardened

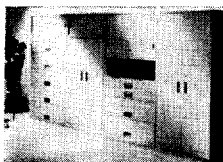
tool steel blade can be easily changed by office personnel. The Model 0-12 portable cutter occupies 19 x 19 inches of table space. Retail price \$139. For information: Martin Yale Business Machines Corp., 500 N. Spaulding Ave., Chicago, Ill. 60624.



Do-it-yourself microfiche system is based on easily updated or revised strips of film. Users may cut and punch new strips on the Re-

cordak Microfiche Master Composing Station. Replacement is then quick and easy, among unchanged rows of images in original fiche—before new distribution fiche are generated. Write: Eastman Kodak Company, Rochester, N. Y. 14650.

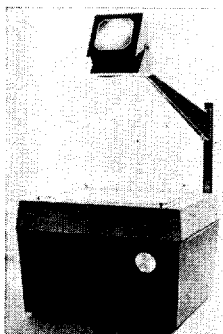
Storage wall system combines lateral filing cabinets (**Broadsides**) with storage cabinets and wardrobes. Units can be combined to function as work stations or as wall dividers (18 inches deep with a uniform top line 80½ inches high). The 800 series Broad-



sides add-on cabinets with sliding doors have an adjustable shelf and dividers. Contact: Steelcase, 1120 36th St. SE, Grand Rapids, Mich.

"... to be a librarian!" is the title of a 16mm color/sound film that explores the mechanics of book acquisition through cataloging, processing and final shelving of new books. The 22 minute film is available for purchase at \$150; a print is available for preview at no charge. Write: Bro-Dart Inc. (Dept. PR 123), 56 Earl St., Newark, N. J. 07114.

Snap-Loc two-drawer desk top file is manufactured in two sizes: for standard microfiche and for aperture cards. A front compressor plate holds the file open at a "V" at the point of reference; cam action pressure eliminates curling of the fiche. There is 21½ inches filing capacity per unit. Additional specifications from: Mead Hatcher Associates, Inc., 1721 Elmwood Ave., Buffalo, N. Y. 14207.



The "Vu-Graph Century" overhead projector synchronizes the focus of both lens and lamp in one operation. The lamp moves into correct position automatically as the lens is focused on the screen. The square-cut lens can be easily cleaned

because it is mounted on a hinge under the projection stage. A 54" x 54 inch screen image is projected from a distance of six feet with the 12½ inch focal length lens. Write: Charles Beseler Company, 219 S. 18th St., East Orange, N. J. 07018.

## HAVE YOU HEARD ?

### Law Libraries

The American Association of Law Libraries has announced two scholarships to be awarded for the year, 1969-70. A tuition scholarship of up to \$1,500 will be awarded for use by a law school graduate who is a degree candidate in an accredited library school. The 1969 award is in memory of Sidney B. Hill, former librarian and general manager of the Bar of the City of New York. In addition, a scholarship of \$150 for tuition plus \$25 for incidentals will be awarded to a member of AALL taking a special course in law librarianship for credit. Applications should be received by Feb 1, 1969. Write: AALL Headquarters, Scholarship Committee, 53 W. Jackson Blvd., Chicago 60604.

### Theatre Libraries

The "George Freedley Memorial Award" has been established by the Theatre Library Association to honor the late founder of the association, theatre historian, and first curator of the Theatre Collection of The New York Public Library. This annual award is to recognize a published work in the field of the legitimate theatre published in the U.S. Submit nominations in writing to the chairman of the award jury: Prof. Robert H. Ball, 11 N. Washington St., Port Washington, N. Y. 11050.

### Isadore Gilbert Mudge Citation

Nominations are invited by the American Library Association for this citation to recognize a distinguished contribution to reference librarianship. The contribution may take the form of an imaginative and constructive program in a particular library; the writing of a significant book or articles in the reference field; creative and inspirational teaching of reference service; or other noteworthy activities. Nominations in writing can be submitted up to March 15, 1969 to the chairman of the citation committee:

Wayne M. Hartwell, Encyclopaedia Britannica, 425 N. Michigan Ave., Chicago 60611.

### Editorial Change at *Library Journal*

On Jan 1, 1969, Eric Moon will relinquish his position as editor-in-chief in order to assume the newly created position of director of editorial development for the R. R. Bowker Company. Mr. Moon has been editor-in-chief since 1959. The new editor-in-chief of *LJ* will be John N. Berry III. Mr. Berry has served as assistant editor of *Library Journal* and as a senior editor in Bowker's book editorial department.

### Atlanta's Special

A course in *Special Librarianship* is being offered during the Fall 1968 semester at the School of Library Service, Atlanta University. The course is being taught by Dr. Charles K. Bauer, manager of Lockheed-Georgia's Scientific and Technical Information Department in Marietta, Georgia.

### Michigan's Library School

The University of Michigan (Ann Arbor) will establish a School of Library Science beginning Jul 1, 1969. Regents of the university have approved a plan which will separate the present department of library science from the College of Literature, Science, and the Arts. The new school will have its own dean and administrative staff.

### Ultrafiche

An advanced microfilming system is being studied at the Denver Research Institute, University of Denver. The *ultrafiche* is a transparency that can hold images of more than 9,000 pages in an area, 2 x 2 inches. The Denver research will use regular library and educational materials in the study supported by the Bureau of Research, U.S. Office of Education. National Cash Register Co., Dayton, Ohio, and Microform Data Systems, Palo Alto, Calif. are cooperating in the study.

## Geoscience Information

The 3rd Annual Meeting of the Geoscience Information Society was held in Mexico City Nov 11-13 in association with the 1968 meeting of the Geological Society of America. Visits to the principal libraries of Mexico City included the National Library, the library of the National University of Mexico, the National Museum of Anthropology, and the National Commission of Nuclear Energy.

## Book Catalog Directory

A directory of on-going book catalogs is being compiled by the Book Catalogs Committee of ALA's Resources and Technical Services Division. Libraries who now have book catalogs are asked to send name and address to: Paula Kieffer, Baltimore County Public Library, 25 W. Chesapeake Ave., Towson, Md. 21204.

## Columbia University Appointment

Dr. Lowell A. Martin, vice president and editorial director of Grolier, Inc. has been appointed professor of library service in Columbia University's School of Library Service. Dr. Martin had been associate dean and professor at Columbia from 1946 to 1953, when he joined the Rutgers University faculty as dean of the Graduate School of Library Service. He moved to Grolier in 1959 and will assume his duties at Columbia on Jan 1, 1969.

## A Very Special Library

The "D Street Project" in South Boston is to have its own resident-oriented, resident-owned library in a community with special needs: the need for adult education courses in English for Puerto Rican residents, and the need to train the residents in skills to enable them to find jobs in the Greater Boston area. Barbara Spence is the library coordinator to establish this library (with no funds and no staff) in the South Boston Action Center, 424 W. Broadway, South Boston, Mass. 02127.

## COMING EVENTS

**Dec 26-31, 1968 . . .** in Dallas, the **American Society for the Advancement of Science**. Section T. Information and Communication. **Dec 28:** Educational Television—An Assessment; Science and the Television Media. **Dec 30:** Science—Knowledge Communications Interfaces; and the vice presidential address, "Hangups in Information Networks," J. C. R. Licklider. **Dec 27:** Society of Technical Writers and Publishers. Technical Publications: Job Patterns and Qualifications.

**Jan 1-21, 1969.** Seminar on computer-based systems for libraries, a three-week non-credit course at the University of Illinois, Urbana. The seminar will be directed by Hillis L. Griffin, Argonne National Laboratory. To apply, write: Extension in Library Science, University of Illinois, 116 Illini Hall, Champaign, Ill. 61820.

**Jan 10-11, 1969.** Workshop on library automation at the Hilton Hotel, San Francisco. The workshop coordinator is Charles P. Bourne . . . sponsored by the San Francisco Chapter of ASIS. For registration: Caryl McAllister, IBM, P.O. Box 66, Los Gatos, Calif. 95030.

**May 1969.** **Sixth Annual National Information Retrieval Colloquium** will be held in Philadelphia (at dates to be announced later). Theme: Information Bazaar. Sponsored by ASIS Delaware Chapter, SLA Philadelphia Council, ACM Delaware Valley Chapter, University of Pennsylvania Moore School of Electrical Engineering, and the U.S. Army Frankford Arsenal. Notice of intention to submit papers to the program chairman: Sam Rosenfeld, Auerbach Corp., 1501 Wilson Blvd., Arlington, Va. 22209 (before Dec 15).

**May 25-27, 1969.** **Fifth Annual Meeting of the Drug Information Association . . .** in Detroit at the Sheraton-Cadillac Hotel. Contact: Dr. Jerome J. Harris, Schering Laboratories, 1011 Morris Ave., Union, N. J.

## CHAPTERS & DIVISIONS

Indiana's Automation 1968

### Boston Walks

An afternoon walking tour of some special libraries in Back Bay was the beginning of the Nov 19 joint meeting of the Boston Chapter and students of Simmons College Library School. Starting from the Boston Public Library, the groups visited the libraries of the New England Mutual Life Insurance Company (Agnes Brite), New England Historic Genealogical Society (Pauline King), New England Merchants National Bank (Mrs. Susan Di Mattia), and the Massachusetts Horticultural Society (Mrs. Muriel Crossman). Dinner and an evening program concluded a purposeful meeting.

### Cleveland

On Nov 12 Dr. William M. Heston, Case-Western Reserve University's vice-president in charge of University Plans and Programs spoke to the Cleveland Chapter: "What's Ahead for Our Colleges and Universities?" On Jan 21, 1969 the handling and retrieval of information in the social sciences will be described by Henry Dubester, deputy director of the Office of Science Information Services, NSF.

### Connecticut Valley

Legislation affecting libraries in the state during 1969 was reviewed by a member of the Legislative Committee of the Connecticut Library Association at the Chapter's meeting on Nov 21.

### Illinois Triples

"Copyright—Three Viewpoints" was the concern of the Illinois Chapter on Nov 21. The speakers: Waldo H. Moore (Copyright Office, LC), Lyle Lodwick (Director of Marketing, Williams & Wilkins Company, Baltimore), and William S. Budington (John Crerar Library).

Purdue's campus was the site of the Oct 4-5 program; Theodora Andrews and Molette Morelock shared the gavel at alternate sessions. Wide ranging problems were discussed including: capability of the IBM 360 on-line system, new products from MARC, library professionalism and the computer, and operations research studies.

### Montreal Directory

Are you pre-planning your visit to Montreal for SLA's 1969 Conference? The 8th edition of the *Directory of Special Libraries in Montreal* is being prepared. Address orders to: Mary Cullen, Chief Librarian, United Aircraft of Canada Limited, P.O. Box 10, Longueuil, P.Q., Canada. (Tentative prices: prepublication \$3.00, after publication \$3.50.)

### South Atlantic

A combined meeting of Metro Atlanta Library Association and the South Atlantic Chapter will hear Blanche Thebom on Dec 17 at the Atlanta Public Library.

### Upstate New York SLA/ASIS/MLA and SUNY Too

The Biomedical Communication Network of the State University of New York was dedicated on Oct 18 at the Upstate Medical Center, Syracuse. Irwin H. Pizer, director of the network, scheduled the formal dedication program in conjunction with a two-and-one-half day meeting of the Upstate New York Chapters of SLA, American Society for Information Science, and the Medical Library Association.

### Virginia Surveys

The Chapter's Education Committee is engaged in a joint study with the Virginia Library Association's Special Libraries Section:

a survey of courses in library science taught in the State of Virginia.

### Public Utilities Section

The 2d edition of *A Union List of Serials for Public Utility Libraries* has been com-

plied by the Section. Prepaid orders at \$10 per copy to: Anne Burnett, Librarian, Pacific Gas & Electric Company, 245 Market St., San Francisco 94106. (Checks payable to Public Utilities Section, SLA.)

A petition for Division status is being circulated among the members of the Public Utilities Section.

## MEMBERS IN THE NEWS

**Elizabeth Armstrong** . . . to chief librarian, California Institute of the Arts, Los Angeles from U.S. International University, San Diego.

**Mrs. Jimmie D. Aushman** . . . to librarian, Sperry Gyroscope Engineering, Lake Success, N. Y. **Mrs. Florence W. Turnbull** retired on Jan 1, 1968.

**B. M. Burriss, Jr.** is now manager of Technical Information Services for Ampex Corporation in Redwood City, Calif.

**Madeline F. Canova**, chief of the technical library branch, Air Force Weapons Laboratory, Kirtland Air Force Base, New Mexico received the Meritorious Civilian Service Award at her retirement on July 12 after 26 years of service . . . the last nine years at Kirtland AFB.



**Marietta Chicorel** . . . to project manager of CCM Information Sciences, a subsidiary of Crowell Collier and Macmillan, Inc., from chief editor of *Ulrich's International Periodical Directory*. She is chair-

man-elect of the Publishing Group of SLA's New York Chapter.

**G. L. Filipelli** . . . appointed administrator of information services at Cominco Ltd., Montreal from supervisor of market research services.

**Dr. David A. Kronick**, librarian of the University of Texas Medical School, San Antonio is the joint recipient of a \$108,492 Public Health Service grant for study of "Educational Needs in Medical Librarianship and Health Sciences Information." The joint investigation by Texas and Case Western Reserve University will study 12,500 health-related institutions.

**Marian G. Lechner**, librarian of Connecticut General Life Insurance Company in Hartford, is acting president of the Connecticut Library Association because of the illness of the president, Rev. Francis A. Small of Fairfield University.

**Mrs. Cathryn C. Lyon**, head of the Technical Library Section, U.S. Naval Weapons Laboratory, Dahlgren, Va., is serving as a member of the Executive Council of the Federal Professional Association.

**Anne McCann**, senior medical subject heading specialist at the National Library of Medicine has transferred to the Science Information Facility of the Food and Drug Administration.

**Edward G. Strable** has been appointed manager of information services in the Chicago office of J. Walter Thompson Company. For the past four years he has been executive secretary of ALA's Reference Services Division and the American Library Trustee Association.

**Dr. Pauline Vaillancourt**, formerly chief librarian of Memorial Sloan-Kettering Cancer Center, N. Y. is now a consultant in medical and scientific libraries.



**Marilyn K. Johnson and Gabriele E. M. Wohlaue** have been appointed technical library supervisors at the research center of Shell Development Company, Emeryville, Calif.

**Julie Louise Moore and Michael Sadowski** . . . named Ph.D. fellows at the School of Library Science, U.S.C.

**William S. Budington, Herman H. Henkle, Reinhold Schlueter and LeRoy Zweifel** were speakers at the "Information Resources Networks and Retrieval" Institute on Nov 11-12. The institute was sponsored by the Department of Engineering, University of Wisconsin-Madison.

District of Columbia Library Association officers for 1968-69 include: **Alice D. Ball**, president; **Elizabeth L. Tate**, vice-president and president-elect; **Alice J. Eppink**, secretary; **Carol H. Raney**, treasurer; and **Lois Fern, Virginia C. Hills, and Robert T. Jordan** as members-at-large of the executive board.

SLA members who will present papers at the Advances in Documentation Symposium at the meeting of the Interamerican Agricultural Librarians and Documentalists in Bogotá, Colombia on Dec 2-7 are: **J. R. Blanchard**, university librarian, University of California, Davis; **Abner Vicentini**, director of the library, University of Brasilia; and **John Sherrod**, director, U.S. National Agricultural Library.

## OFF THE PRESS

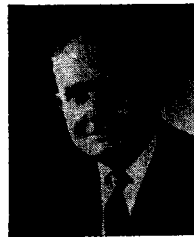
### American Environment

*From Sea to Shining Sea: A Report on the American Environment—Our Natural Heritage* has been issued by the President's Council on Recreation and Natural Beauty. Progress in protecting and restoring our surroundings and recommendations for future action are presented. It also contains a guide

## In Memoriam

**Bradford M. Hill** on August 10 in Boston. Mr. Hill had served the Boston Public Library in many capacities during a long career; he was consultant to the Director for Special Collections at the time of his retirement in 1965. President of SLA's Boston Chapter in 1949-50.

**Mary Meredith Lynch** on July 3 in Pittsburgh. Miss Lynch was librarian of the Pittsburgh Academy of Medicine from 1921 until her retirement in 1958. She was one of the founders of the Pittsburgh Special Libraries Association, a predecessor of the Pittsburgh Chapter. Miss Lynch was the Chapter's first vice-president, 1922-24.



**Charles J. Shaw**, retired senior vice-president of the H. W. Wilson Company, on October 24 in Yonkers, N. Y. After service in Library of Congress and the New York Public Library, he joined the H. W. Wilson Company in 1936 where he played an important role in the publication of the second edition of the *Union List of Serials*. He was elected vice-president in 1957; after his retirement in 1966 he continued as a member of the company's Board of Directors.

for action by local officials, professions, and by all citizens interested in community improvement, pollution control, and conservation. Available from: Superintendent of Documents, \$2.50 a copy.

### Library Technician Training

*The Brief on the Training of Library Technicians* was presented to the Minister of Education of the Province of Quebec by the Quebec Library Association in November. **Helene Dechief** represented the SLA Mon-

trear Chapter on the Provincial Advisory Committee. QLA Publ. No. 8 is available from: Mlle. Monique Tessier, 3904 St. Hubert St., Montreal 24, P.Q., Canada. \$1.25 a copy.

### Book Cover Fabrics

*Fabrics for Book Covers*, a new Product Standard, has been prepared by the National Bureau of Standards at the request of the Book Manufacturers Institute. It replaces Commercial Standard CS 57-40. Seven groups of plain finished book cloths and buckrams are included. Order Product Standard PS 9-68 from Superintendent of Documents at \$0.10 a copy.

### Mini-Journal

*The International Microfilm Journal of Legal Medicine* is being distributed only as microfiche by University Microfilms. Subscriptions to the quarterly journal are \$17.50 per year; single issues are \$5.

### Fire Protection

*Standard for the Protection of Electronic Computer/Data Processing Equipment* has been issued by the National Fire Protection Association as NFPA Technical Standard No. 75. Order from: NFPA, 60 Battery-march St., Boston 02110, at \$0.75 a copy.

### For Educators

*Current Contents, Education* has been announced as a weekly guide to the contents pages of 600 educational journals. The first issue will be published in Jan 1969. Address: Institute for Scientific Information, 325 Chestnut St., Philadelphia 19106. Subscriptions at \$67.50 per year; special rates for groups. Copies of the pilot edition are available on request.

### Introductions, Anyone?

*I Am Happy to Present* by Guy R. Lyle and Kevin Guinagh has been published in a second edition. The 106 introductions are given by personalities from many different

fields. A guide to the presentation, content and quality of introductory speeches. H. W. Wilson Company, 950 University Ave., Bronx, N. Y. 10452. \$6. a copy.

### New Petroleum Services

Two new series have been announced by the American Petroleum Institute for its technical information services. The new titles are *API Abstracts of Petroleum Substitutes Literature and Patents* and *API Abstracts of Transportation and Storage Literature and Patents*. Subscription rates are based on the gross assets of the subscribing companies. For information: API, Central Abstracting and Indexing Service, 555 Madison Ave., N. Y. 10022.

### Filmography

Advanced techniques available to movie makers are described in 170 films listed in a new booklet, "A Filmography of Films about Movies and Movie Making," prepared at the Department of Photography and Cinema, Ohio State University. Single copies are available free from Eastman Kodak Company (Dept. 454), 343 State St., Rochester, N. Y. 14650. Quantity prices are \$1.00 for 10 in multiples of 10.

### Moderate-Size Automation

A new illustrated 10-page brochure describes two types of automated library systems geared to the needs of moderate-size libraries. An autonomous system and a satellite system provide support of circulation, acquisitions, cataloging, serials and management. Write to: Hamilton Standard System Center, Farmington, Conn. 06032.

### Monastic Manuscript Microfilm Project

In the spring of 1964 an idea crystallized at St. John's Abbey and University, Collegeville, Minn. The idea led to the extensive program of photographing the invaluable manuscripts still preserved in European monasteries which have enjoyed an unbroken existence since the Middle Ages. Father

Oliver Kapsner OSB, director of the project, first contacted the four Italian abbeys at Monte Cassino, Subiaco, Cava and Montevergine. At the latter three locations there were 500 manuscripts for preservation.

In Austria 19 medieval monasteries were surveyed. The photographing of their 10,000 manuscripts began in February 1965. The more than 2.5 million exposures represent more than 5.0 million pages since two pages are photographed at each exposure. In addition 18,000 color exposures were prepared of illuminated pages. Collections yet to be filmed are in Switzerland, Spain and Italy.

The negative microfilm and one positive

copy are deposited in the library at St. John's, and one positive film copy of the manuscripts is presented to the home monastery. The Monastic Manuscript Microfilm Project operates in cooperation with University Microfilms. The project is sponsored by generous grants from foundations and societies, as well as gifts from individual friends of St. John's University.

Inquiries regarding policy and procedures for use of this vast resource of manuscript material may be addressed to: Prof. Julian G. Plante, Curator, Monastic Manuscript Microfilm Library, St. John's University, Collegeville, Minn. 56321.

## RECENT REFERENCES

DOMINION BUREAU OF STATISTICS. EDUCATION DIVISION. ADULT EDUCATION SECTION. *Survey of Libraries Part II: Academic Libraries, 1964-65*, (Catalogue No. 81-206 Annual). Ottawa, Queen's Printer, 1967. 54p. tables. pap. 75¢.

An annual publication of results of surveys covering school libraries and library school graduates. Provides information on enrolment, book-stock, staff, salaries and current operating expenditures during the academic year 1964-65 for libraries in numerous institutions including universities and colleges with enrollment of 100 or more, technical institutes and trade schools. . . . Data on characteristics, background, salaries, destinations and elective courses of library school graduates of 1966 in the five Canadian library schools.

MEDICAL LIBRARY CENTER OF NEW YORK. *Union Catalog of Medical Periodicals. I. Listing Medical and Paramedical Periodicals in Existence in 1950 and New Titles Published Since. . . .* N. Y.: 2d ed., 1968. 624p. pap. \$12.50, printed catalog alone, to libraries outside the N. Y. metropolitan area; included as part of subscription service for libraries in the N. Y. metropolitan area, apply.

Published catalog is reproduced from the UCMF computer tapes. Lists holdings of 83 libraries in the N. Y. metropolitan area as of Dec. 31, 1967. Title entries are accompanied by full bibliographic data.

NATIONAL SCIENCE FOUNDATION. *Federal Funds for Research, Development, and Other Scientific Activities Fiscal Years 1966, 1967, and 1968*, vol. XVI. (Surveys of Science Resources Series; NSF 67-19.) Washington, D. C.: 1968. xi, 248p.

charts, tables. pap. \$1.25. (Available from Superintendent of Documents, U.S. Government Printing Office)

Sixteenth report covering federal funds for research, development, and R & D plant or facilities related to collection and dissemination of scientific and technical information; and amounts obligated for collection, analysis, and publication of general-purpose scientific data. Information is given on the detailed fields of science for which the funds were obligated, by agency and subdivision.

———. *R & D Activities in State Government Agencies Fiscal Years 1964 and 1965*. (Surveys of Science Resources Series; NSF 67-16). Washington, D. C.: 1968. x, 68p. charts, tables. pap. 45¢. (Available from Superintendent of Documents, U.S. Government Printing Office.)

The first report to provide data on the R & D activities of all the states shows separate data on basic research, applied research, and development. Shows data for each state and compares the totals of state effort with federal R & D activities. Appendices have Technical notes; Statistical tables; R & D activities at state universities and colleges, 1964 and survey questionnaire.

SAMORE, Theodore. *Library Statistics of Colleges and Universities, 1963-64, Analytic Report*. (National Center for Educational Statistics Publication; OE 15031-64). Washington, D. C.: U.S. Dept. of Health, Education, & Welfare, Office of Education, 1968. vi, 48p. tables. pap. 40¢. (Available from Supt. of Docs)

This publication continues the series of analytic reports on management and salary data of academic libraries, paralleling the series titled *Library Statistics of Colleges and Universities, Institutional Data*. The statistical tables of this report provide a factual basis for comparing library resources and services with ALA-recommended standards.

As a service to its readers *Special Libraries* is pleased to reprint the complete report of the National Advisory Commission on Libraries as it appeared in the *Congressional Record*.

# Report of the National Advisory Commission on Libraries

REMARKS

OF

HON. CARL D. PERKINS

OF KENTUCKY

IN THE HOUSE OF REPRESENTATIVES

*Monday, October 14, 1968*

Mr. PERKINS. Mr. Speaker, in the closing hours of a congressional year, it is traditional that we review our accomplishments and set forth some goals for future action. Accordingly, as chairman of the House Education and Labor Committee, I point with pride to the progress we have made in advancing and strengthening the Nation's library resources. Title II of the Higher Education Act, which we have recently extended in the Higher Education Amendments of 1968, will continue for another 3 years Federal assistance to help provide college library resources, training and research in librarianship, and cooperative cataloging by the Library of Congress.

In connection with this important program, I wish to call my colleagues' attention to the recent report of the National Advisory Commission on Libraries. As you know, when this Commission was established in September of 1966, it was directed "to appraise the role and adequacy of our libraries, now and in the future, as sources for scholarly research, as centers for the distribution of knowledge, and as links in our Nation's rapidly evolving communications networks."

During the 90th Congress, we have considered and approved various programs, in addition to HEA, title II, such as the Public Broadcasting Act, Interlibrary Cooperation, and the new Networks for Knowledge, which, to me, all appear related to the work of the Library Commission, soon to be disbanded now that its report has been transmitted to the President.

In reading the Commission's report, I find that this initial study makes it

clearly evident that the job has just begun if we really mean to serve the educational needs of all our people. The first recommendation of the advisory panel is the establishment of a National Commission on Libraries and Information Science as a continuing Federal planning agency. It is my hope that early in the 91st Congress we will consider this recommendation and take positive action.

At this time, I insert the report of the National Advisory Commission on Libraries in the RECORD so that all the Members may have the benefit of its findings and recommendations:

THE SECRETARY OF HEALTH,  
EDUCATION, AND WELFARE,

*Washington, D.C., October 3, 1968.*

The PRESIDENT,  
*The White House,*  
*Washington, D.C.*

DEAR MR. PRESIDENT: The Report of the National Advisory Commission on Libraries, established in September 1966, by your Executive Order Number 11301, is attached. The Report has been reviewed by the members of the President's Committee on Libraries.

The Committee found it a highly stimulating report, containing numerous ideas which would strengthen the role of libraries in our society. It reflected the painstaking and energetic efforts of the Commission to look at the varied problems confronting libraries and librarians as they seek to supply a variety of services in the midst of growing demands.

Libraries are the keepers of our history and our culture. But they are not merely storehouses for the relics of the past, but meeting places for people and ideas, vital partners in our system of education.

The Committee urges a wide distribution of the Report. Its recommendations should be considered and discussed by individuals and groups at Federal, State and local levels, both in and out of the library community. It should encourage all of these groups as they make plans for even more effective services.

Respectfully yours,

WILBUR J. COHEN,  
*Chairman, President's Committee on Libraries.*

LIBRARY SERVICES FOR THE NATION'S NEEDS:  
TOWARD FULFILLMENT OF A NATIONAL  
POLICY—REPORT OF THE NATIONAL ADVISORY  
COMMISSION ON LIBRARIES, JULY 1968

ACKNOWLEDGMENTS

The appendixes of this Report of the National Advisory Commission on Libraries contain lists of the witnesses who offered testimony and organizations which submitted useful special studies. Many other individuals in one way or another contributed to the efforts of the Commission. It is appropriate here to mention our particular thanks to Dr. Frederick H. Wagman, Director, University Library, The University of Michigan, whose preliminary compilation of written material at the request of the Commission served as indispensable resource for discussions at its final meetings and enabled the distillation of content for the December 1967 preliminary Report and the present Report to be completed within the limited time available. Finally, the Commission wishes to thank the officials and agencies of the Federal Government, whose cooperation has been most helpful from the beginning.

LETTER OF TRANSMITTAL

NATIONAL ADVISORY COMMISSION ON  
LIBRARIES,

*Washington, D.C., July 1, 1968.*

Hon. WILBUR J. COHEN,  
*Secretary, Department of Health, Education,  
and Welfare; Chairman, President's Com-  
mittee on Libraries, Washington, D.C.*

DEAR MR. SECRETARY: In accordance with the Executive Order of the President of the United States, we are pleased to transmit to the President's Committee on Libraries the recommendations of the National Advisory Commission on Libraries. The Commission believes that its six broad objectives for the transitional and future development of library and information services can be achieved responsibly and realistically through the structural and organizational recommendations set forth in these pages.

The Commission has tried diligently to meet its charge as set forth in Chapter 1 of this Report. We have met eleven times as a full Commission to discuss library problems and potentials as perceived by a most interesting diversity of viewpoints represented by our membership. We have heard formal testimony and had informal discussions with technological experts, librarians, people from government and private agencies, and a variety of users and producers of both conventional literary material and newer forms of informational transfer. Regional hearings were held in communities throughout the country by members of the Commission to ascertain the people's library needs at the grass roots of our nation. Special studies on a number of relevant topics, in most cases specially commissioned by us, were submitted to the Commission and contributed to our deliberations on problems and issues. Already, areas for vital new research are evident.

On the basis of deliberations through early December 1967, the Commission had agreed on its recommendations and reached some basic conclusions on fulfilling the national policy we recommend for library services appropriate to the needs of the people. We presented these conclusions and our specific recommendations in a preliminary Report dated December 1967. Since then, the Commission has prepared a chapter analyzing its response to the President's charge, completed a statement on library manpower for Chapter 3, and made certain other refinements and modifications in the five basic recommendations now set forth in Chapter 4.

The work we have started can continue most meaningfully through the combined efforts of many existing and evolving entities, coordinated by the overall planning efforts of our recommended National Commission on Libraries and Information Science. There must be continuing, coordinated study and action in the years ahead—it is an ongoing, never-ending venture. Because the results of all the activities of the present Commission can continue to provide resource on library and information science and service in the future, we are supplementing our Report with a forthcoming volume which will be based on a variety of materials and data, including the special studies, in an attempt to synthesize and document a complex set of problems and issues.

At this time, it is our hope that the President's Committee on Libraries will study our Report and commend our proposals for action to the early attention of the President and the Congress. The problems are urgent. A sound beginning can be made.

Sincerely yours,

DOUGLAS M. KNIGHT,  
*Chairman, National Advisory Commis-  
sion on Libraries, President, Duke Uni-  
versity.*

MEMBERSHIP OF THE NATIONAL ADVISORY COM-  
MISSION ON LIBRARIES

Chairman: Douglas M. Knight, President, Duke University, Durham, North Carolina.

Vice Chairman: Frederick H. Burkhardt, President, American Council of Learned Societies, New York, New York.

Estelle Brodman, Librarian and Professor of Medical History, Washington University School of Medicine, St. Louis, Missouri.

Launor F. Carter, Vice President and Manager, Public Systems Division, System Development Corporation, Santa Monica, California.

Verner W. Clapp, Consultant, Council on Library Resources, Washington, D.C.

Carl Elliott, Attorney at Law, Jasper, Alabama.

Alvin C. Eurich, President, Academy for Educational Development, New York, New York.

Mildred P. Frary, Director of Library Services, City Schools Libraries, Los Angeles, California.

Herman H. Fussler, Director of the University Library and Professor in the Graduate Library School, The University of Chicago, Chicago, Illinois.

Marian G. Gallagher, Professor of Law and Law Librarian, University of Washington, Seattle, Washington.

Emerson Greenaway, Director, Free Library of Philadelphia, Philadelphia, Pennsylvania.

Caryl P. Haskins, President, Carnegie Institution of Washington, Washington, D.C.

William N. Hubbard, Jr., Dean, University of Michigan Medical School, Ann Arbor, Michigan.

Dan Lacy, Senior Vice President, McGraw-Hill Book Company, New York, New York.

Mrs. Merlin M. Moore, Supervisor of Economic Education, State Department of Education, State Capitol, Little Rock, Arkansas.

Carl F. J. Overhage, Professor of Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Harry H. Ransom, Chancellor, University of Texas, Austin, Texas.

Wilbur L. Schramm, Director, Institute for Communication Research, Stanford University, Stanford, California.

Mrs. George Rodney Wallace, Trustee, Fitchburg Public Library, Fitchburg, Massachusetts.

Stephen J. Wright, President, United Negro College Fund, Inc., New York, New York.

#### *Staff of the commission*

Melville J. Ruggles, Executive Director (November 1, 1966–December 31, 1967).

Daniel J. Reed, Deputy Director (January 1, 1967–December 31, 1967).

E. Shepley Nourse, Editor (August 15, 1967–).

Mary Alice Hedge, Administrative Officer (August 1, 1967–).

Richard K. Burns, Research Associate (September 11, 1967–December 31, 1967).

#### FOREWORD

When the President appointed the National Advisory Commission on Libraries more than a year ago, he gave it a demanding task, and one with urgent as well as enduring aspects. He asked the Commission to consider the nation's library structure, the nature of the present and wisest possible future involvement of Federal support in the development of national library and informational resources, and the most effective shaping of those resources to our common need as we can picture it over the next decade. This third concern of the Commission has been for resources of every kind, and needs at every level. We know very well how difficult it is to relate Federal and local, public and private sources of support and definitions of purpose, but we have tried to suggest some of the ways in which that crucial job can be done.

Our recommendations will be understood best, I think, by seeing them as they result from our basic concern for adequate library resources. This concern may in its turn seem

simple or self-evident until we look at the history of libraries and the needs of this country in the late 20th century—needs which grow equally from the individual citizen and the large corporation, the pioneering university and the complex Federal agency. The historical growth of libraries is a vivid commentary on our problems today, in fact, for we see at major periods in the past the development of one or two particular kinds of library. Today we have the whole array of libraries alive at once; our world demands this variety, while our achievements and our great need grow from it. We are Alexandrian or Renaissance citizens in our development of great book and manuscript collections which range across the past of Western culture; we are Roman or Baroque in many of our superb private and personally shaped libraries; we are medievalists in our development of libraries for specialized fields of learning; and we continue the public or national traditions of the 18th and 19th centuries in our great Federal, municipal, and university libraries. Just as we have an astonishing range of demands on our libraries, so we have range in the kinds of library we create and support.

But what in fact do we mean by a library? We must ask this elementary question, because we are surrounded, almost overwhelmed, by the tangible fact of libraries. We take their meaning, like their existence, too much for granted. That existence, and meaning are best understood, perhaps, by realizing what libraries are *not*—not warehouses of books and manuscripts, not collections of reading rooms, and not sets of reading devices. Any library is instead a particular kind of meeting-place, and it grows from certain major attributes of the human mind and spirit. It is not a neutral spot, not passive, and yet it does not have restrictive purpose or direction as a thoughtful radio or television show does. A library differs from other systems of communication, indeed, precisely because its value and power emerge from the use which we as individuals choose to make of it.

A library—great or small, privately or publicly supported—has two major and unique functions. First, it makes possible meetings of mind and idea which are not limited by our normal boundaries of time, space, and social or economic level. An effective library gives us the option of moving to the far side of the world, to the fifth century B.C., or to the company of prophets and princes. And we do all this, not by the transient means of fantasy, but by the enduring power of our own human awareness. We can become more than we were; we can, if we wish it, increase our individual stature as well as our public effectiveness.

To say this is to suggest the second great function of a library. It is the institution in our society which allows and encourages the development, the extension of ideas—not their passive absorption, but their active

generation. Here our image of the conventional reading room many interfere. We picture a hundred silent, inert figures, and forget that each is making some active reckoning with all that he thought to be true before he confronted a new range of ideas or conditions. He may be more active at that quiet moment, in fact, than at any other time in his life. The technical means of his encounter may be a record, a tape, a film, a print-out or—most radical of all—a book. Libraries are not bounded by means; they will and should employ any means to achieve their ends.

At a time of great technical virtuosity it is important to realize that in the predictable future new means of information storage and retrieval will not displace the book. Nor will they lessen the need for materials, buildings, or skilled staff. Instead they will extend and supplement what we now have, and our investments during the next decade must take equal account of the enduring purposes of libraries and the diverse emergent means of strengthening them.

Clearly, of course, libraries cannot achieve their ends for the illiterate or the indifferent. They are dependent on teachers, writers, parents to set interest alight, but they are the means of meeting the interest, and giving it range beyond those who first stirred it. This creative center which is a library should not be defined by the adequacy of its space, equipment, and collections alone, but by the adequacy of its people—those who first teach the mind to inquire, and those in the libraries who can show it *how* to inquire. The librarian of today and tomorrow must have many technical and professional skills, but above all he must have skill with people. He is a teacher whose subject is learning itself, and his class has no limits on age, field of study, or degree of competence. The national policy which we propose is as a result based equally on the need for skilled and sensitive people, bold and yet imaginative technical means, and support from every sector of the economy as well as every major level of government.

DOUGLAS M. KNIGHT,

*Chairman, National Advisory Commission on Libraries, President, Duke University.*

#### CHAPTER 1.—THE COMMISSION'S CHARGE

In the Executive Order of September 2, 1966 (see Appendix A), the National Advisory Commission on Libraries was charged to:

(1) Make a comprehensive study and appraisal of the role of libraries as resources for scholarly pursuits, as centers for the dissemination of knowledge, and as components of the evolving national information systems;

(2) Appraise the policies, programs, and practices of public agencies and private institutions and organizations, together with other factors, which have a bearing on the role and effective utilization of libraries;

(3) Appraise library funding, including Federal support of libraries, to determine how

funds available for the construction and support of libraries and library services can be more effectively and efficiently utilized; and

(4) Develop recommendations for action by Government or private institutions and organizations designed to ensure an effective and efficient library system for the Nation.

The Commission tried conscientiously to meet these charges. In particular, it attempted a broad look at the complex roles of libraries in relation to user needs in a changing society, and it developed some recommendations for structural adaptations that can foster evolutionary development and enable continuing, coordinated study and action in the years ahead. The Commission's conclusions with respect to major objectives and its five specific recommendations for realizing these objectives are the basic subject matter of this Report. Chapters 2 through 4 present the rationale for the Commission's response to point 4 in the Executive Order.

Here in Chapter 1, however, it seems appropriate to comment on the response of the National Advisory Commission on Libraries to the first three points set forth in the Executive Order.

In some areas the Commission feels it would be presumptuous to make premature judgments on the basis of current evidence, but even in these cases some tentative judgments can be made. The discussion that follows touches on many areas, including some still confused by question affecting the philosophy, administration, and financing of library and information services for the nation's needs. Tackling the imponderables is part of the job ahead.

#### *Evolving responsiveness to user needs*

With respect to point 1 in the original charge, the National Advisory Commission on Libraries approached its appraisal of the role of libraries in several ways. It arranged to hear a variety of testimony (see Appendixes C and D); it sponsored several major studies on basic aspects of the roles of libraries—notably the System Development Corporation report on *Technology and Libraries* and the American Council of Learned Societies' study *On Research Libraries* (see Appendix B); and its members have discussed the issues at some length and familiarized themselves with many of the other major studies that fall into this general area. As a result of this effort, the Commission has reached a number of conclusions that have led to its specific recommendations.

The Commission believes that libraries are both essential and major elements in providing resources for scholarship in almost all fields of knowledge, in serving as centers for the dissemination of knowledge, and in serving as components in the evolving national information systems. The library role in these matters is in fact so critical that the Commission believes that libraries serving these purposes must be significantly

strengthened. This increased strength will require a variety of different approaches and techniques; Federal support, long-range planning, and better coordination are all urgent requirements.

In the Statement by the President accompanying the Executive Order, three serious questions were asked about the future of our libraries. One of these was quite similar to the item in point 1 of the Commission's charge about the role of libraries as components of evolving national information systems. It asked:

What part can libraries play in the development of our communications and information-exchange networks?

In considering the role of libraries in national information systems and in communications and information-exchange networks, the Commission found many uncertainties, often further complicated by semantic confusion and a tendency to polarize conventional written information and scientific and technical data. The National Advisory Commission on Libraries favors resolving the uncertainties through multiple but coordinated planning and experimentation. It urges an evolutionary development responsive to user needs, whether it is simple inter-library cooperation or a highly technical communications system. Some points supporting this conclusion appear to be already evident.

Libraries are reservoirs of information whose means and ends of distribution are determined by the function the information is to serve in the hands of the user rather than by some abstract set of values inherent in the term "library" itself. Similarly, one cannot evaluate electronic and computer-processed information stores except in terms of improving the function of the ultimate user of this information.

The requirements for effective library and information access for students, scholars, and practitioners in various disciplinary areas and at various levels display sharp and complex variations. Consequently, sweeping generalizations with respect to user needs are likely to be misleading through incompleteness and inaccuracy. For example, some misunderstandings exist because the need for books has now been joined by needs for information in other formats. In some technical fields traditional books may be playing a decreasing role as reservoirs of information. In other fields the need for traditional literary information may actually be increasing. But in all fields the needs are multiple and are likely to become more so as new multidisciplinary relationships emerge and develop simultaneously with further highly specialized needs.

At the beginning levels of formal education, we find that the close adaptation of elementary school libraries to the functional needs of changing teaching patterns has made the book only one of many information resources handled by the information

center of the elementary school. It is at other levels within the formal educational system—the secondary school, college, and university levels—that library needs are most evident and least satisfied. Here the more traditional understanding of the library asserts itself and a wide variety of measures will be needed, including more collaborative efforts among these libraries, to insure their long-range effectiveness. As for academic research, the library responses to these needs display, even where there appears to be great strength, severe stresses and great unevenness in access.

The roles of the public library are changing. The relative inefficiency of completely self-planned instruction and the increasing availability of organized instruction within the community have decreased the function of the public library as the university of the poor. Nevertheless, as educational demands upon the public library by the educational system itself increase, and as the sophistication of the community increases, the public library becomes an essential element within the community as an information reservoir for multiple user groups.

It follows from the foregoing paragraphs that naturally evolving systems that clearly serve the needs of users should be given support in their own right at this time. No one can perceive the final nature of communications and information-exchange networks, nor the quality of a national information system—with a single exception. The exception is that such a system will finally be made up of a large number of highly specialized individual components, each one of which should be designed to serve the needs of a defined user group.

The specialized libraries, such as the National Library of Medicine, one of our three existing national libraries, can therefore be looked upon as important models of how a library alters or develops its role and activity to serve a defined group—in this case the medical scientists and practitioners. The National Library of Medicine also engages in cooperative activities. Likewise the largest of our national libraries, the Library of Congress, has demonstrated many kinds of cooperation with other units, thus exemplifying how the understanding of the need of response to a user group (e.g., the Congress) does not exclude sensitivity to cooperation with the larger whole.

Libraries badly need support in establishing new means of intercommunication and cooperation. Only after this kind of support of the existing order has been established can it be reliably estimated what the role of these units is in the evolving national information system.

To summarize, then, and to place the Commission's response to the very broad point



1 of its charge in somewhat clearer focus, the following observations are relevant here. These are shared by members of the Commission and recur many times throughout this Report in various contexts.

First, in order to improve the access of our society to information, the Commission believes the basic necessity is to foster development by an evolutionary process. An example is the application of technology, which can play an extremely important role in improving library and informational operations; the Commission does not presently see a technological solution that will make either the printed book or the library itself quickly obsolete—nor does it see any near-term system that will inexpensively provide instant access to all knowledge at any location.

Second, if the present unsatisfactory situation, described particularly in Chapter 3 of this Report, is to be improved, the Commission believes there should be augmented Federal support for: (a) national or regional resource collections and services for infrequently used research materials in a carefully planned pattern; (b) nationally oriented indexing, cataloging, abstracting, and other bibliographical services; (c) basic and applied research in library operations and in the intellectual problems, technology, and economics of information transfer and dissemination.

Third, it is apparent that public, school, and academic libraries will all be obligated to change many of their methods of work, their interrelationships, and some of their roles and objectives in the years ahead. If these libraries are to be responsive to contemporary and future requirements, the Commission believes that changes will have to take place at a much faster rate than has heretofore been the case. To effect more rapid rates of change and response, funds, among other things, will be required that are not now available.

Fourth, there are, and there will continue to be, many information dissemination and data-handling functions that may be handled in part or entirely outside the walls of traditional libraries—e.g., indexing, abstracting, literature evaluation, synthesis, and computer or other means of access to extensive economic, sociological, scientific, and other data banks. These services are of great importance in insuring effective access to the resources collected, organized, preserved, and made available primarily through libraries—especially those of a scholarly research nature.

Fifth, the Commission believes that the nation's library and other information systems will continue to be a shared responsibility of Federal agencies, the States, municipalities, educational institutions, and many other public and private organizations. No monolithic Federal or other centralized administrative control seems either feasible or desirable. There will have to be many dif-

ferent kinds of information systems and working relationships among a variety of institutions if we are to provide effective access to relevant information for our society. New systems, roles, and relationships are likely to emerge at very different rates of speed in response to widely varying user needs.

Finally, it should be stated here that the tasks of analyzing the needs, planning, setting standards, allocating resources, measuring performance, and coordinating efforts will be difficult and complex in the years ahead. Effective progress will require the sustained effort of the present Commission's recommended ongoing National Commission on Libraries and Information Science working with Federal agencies, the national libraries, and many other institutions, groups, and individuals.

#### *The fragmentation of efforts*

The second of the President's charges required the National Advisory Commission on Libraries to "Appraise the policies, programs, and practices of public agencies and private institutions and organizations, together with other factors, which have a bearing on the role and effective utilization of libraries."

In an effort to accomplish this appraisal, a number of the special studies referred to earlier were planned by the Commission to concentrate on the various kinds of libraries and the different public agencies involved. These studies by competent authorities included one on the Federal Government and libraries by Duke University, one on State libraries and library agencies by Nelson Associates, Inc.; one on research libraries by the American Council of Learned Societies; three on undergraduate and junior college libraries, public libraries, and school libraries, respectively, all by Nelson Associates, Inc.; and one on special libraries by the American Documentation Institute. The Commission also heard testimony from representatives of all types of libraries, from Federal and State agencies concerned, and from library associations.

It is impossible to present any reliable appraisal of the policies, programs, and practices of even a single type among the multitudinous agencies and institutions that are involved in giving library and information services to the American people. An overriding conclusion, however, evident from all the studies and hearings, is that there is an extremely wide range in both the character and the adequacy of library services and library resources. The incomparable holdings of the great university libraries contrast starkly with the nearly empty shelves of new community colleges and similar institutions. Residents of some large cities and affluent suburbs enjoy a wealth of library services denied to residents of most rural areas. The schools of suburbia are likely to have superb libraries, the schools of urban and rural slums none at all—at least until the Ele-

mentary and Secondary Education Act of 1965 (P.L. 89-10, P.L. 89-750) began to offer assistance. What kind of library service an American has available to him may have the widest possible variation, depending on his means and where he lives. In general, the areas of greatest poverty and social need and the institutions confronting the most critical social and educational problems are those with the least adequate library services. Where such great efforts are required to induce nonusers of library services to become users, we face a great lack.

More detailed appraisals of particular strengths and weaknesses are reflected in the definitions of objectives and the recommendations for action that make up the ensuing chapters of this Report. A forthcoming book planned by the Commission and based on Commission materials, including a number of the special studies, will attempt a further analysis of the multiplicity of users and uses of library and information services. Surely one of the primary tasks of the present Commission's recommended ongoing National Commission on Libraries and Information Science will be broad planning toward understanding and coordinating the present fragmented situation.

In the Statement by the President accompanying the Executive Order establishing the National Advisory Commission on Libraries, there was a question, somewhat related to point 2 in the charge but directed toward the fragmentation of Federal efforts:

Are our Federal efforts to assist libraries intelligently administered, or are they too fragmented among separate programs and agencies?

As mentioned above, there are many current complexities in evaluating and even identifying some of the programs and the relationships between them. The Commission clearly believes that coordination of and cooperation between the organic units of the whole body of library efforts, both within the Federal Government and supported by it, are inadequate. Such a body needs a central nervous system. In pursuing this analogy, it is important to emphasize that a central nervous system is the servant of the organs—that each has its own independent and discrete function on behalf of the whole. The central nervous system cannot substitute for the function of the organ, but the function of the organ serves the whole body only when it is coordinated.

For this reason the National Advisory Commission on Libraries does not recommend that one of the organic units—for instance the largest of the national libraries, the Library of Congress—should dominate all of the other organic units in this coordination. Rather, the Commission recommends that a body roughly analogous to that serving the national Library of Medicine as its Regents should be established as a Board of Advisers to the Library of Congress, and that an Institute should be established within the Of-

fice of the Secretary of Health, Education, and Welfare to coordinate developmental efforts. The brain of this system is that overall planning and advisory agency, the National Commission on Libraries and Information Science, already referred to several times here in Chapter 1.

The present Commission believes that, within this system it has recommended, the haphazard fragmentation of efforts can be circumvented and the strength of diversity maximized.

#### *Sources and uses of funds*

The third point in the charge to the National Advisory Commission on Libraries was to "Appraise library funding, including Federal support of libraries, to determine how funds available for the construction and support of libraries and library services can be more effectively and efficiently utilized." Attention was further directed to the following question from the President's Statement:

Are we getting the most benefit for the taxpayer's dollar spent?

The pitiful incompleteness and tardiness of library statistics, and their lack of comparability, make it impossible to give specific quantitative responses to this series of questions. No one knows precisely, or even with close approximation, what the total present library expenditures of the nation are, or even what the Federal contributions to those expenditures are—nor can even approximately reliable specific estimates be made of the costs of remedying the serious deficiencies in library service that we all know exist.

Estimated needs suggest extensive expenditures in order to approach the various sets of standards adopted by the American Library Association (ALA). According to figures supplied to the Commission by the United States Office of Education in June 1968, it would require a lump sum expenditure in 1968 of \$1.6 billion to stock school libraries optimally. Just to make up the backlog of space required to construct centralized public school libraries where they did not exist in 1961 would require \$2.145 billion. Space requirements for replacement and new growth for public libraries have been estimated at \$1.132 billion for the period 1962-75. As for academic libraries, available figures compare present trend with optimum trend over the total period 1962-75: \$1.945 billion compared with \$9.891 billion for books and materials, \$120 million compared with \$360 million for new construction.

Obviously such large amounts are beyond immediate achievement, but the estimates afford some general measure of the magnitude of the financial problem that lies ahead in the development of library services. The present Commission has not attempted to make its own specific estimate of the dollar needs of libraries—in part because the members have not found it possible to evaluate existing standards and do not believe an adequate factual basis for a reliable esti-

mate exists, and in part because any estimate would quickly be made obsolete by changing needs and costs—but primarily because the principal need is to create machinery for continuing examination of changing library needs, for devising means of meeting them, and for determining priorities and costs. This would be the task of the permanent National Commission on Libraries and Information Science proposed in this Report.

It already seems perfectly clear, however, that the need for additional financial support for our libraries is great at present and will grow rapidly in the future. Population growth, our more extensive educational commitments, the rapidly increasing role of research, the greater complexity of our society, and our determination to achieve a massive improvement in the educational and vocational status of the poorer and less-educated among our citizens will join to require very substantial increases in the quantity and quality of library services.

The present Commission has explored possible means of reducing the unit cost of library service to offset in some degree the total financial impact of the need for greatly increased services. Interlibrary cooperation, the establishment of interlibrary networks, and the more extensive employment by libraries of new information technology have all been considered in this connection. As other sections of this Report indicate, the Commission believes that all of these developments have great potentialities for library service and should be vigorously pursued. Their value, however, will almost certainly rest in making it possible for us to have library services of a form and scope now unattainable—for example in making the holdings of the great research libraries more realistically available to users in smaller communities and institutions—rather than in reducing the cost of services. In reality, the effective employment of these new devices and methods will itself require a large additional investment of funds.

The unit cost of library services is, in fact, almost certain to rise substantially over the foreseeable future. Three fourths or more of the cost of library service consists of salaries. These will undoubtedly rise steadily as the general wage and salary level of society rises with higher productivity. Indeed, the acute shortage of professional personnel is likely to drive library salaries up even faster than the general salary level. The absence of opportunities to increase man-hour productivity comparable to those available in industry, coupled with increases in salary rates, will produce substantial and inescapable increases in unit costs. This is the same problem the nation faces in connection with increasing costs of education and medical services.

Since the principal reason for the steady increase in the cost of library services, as of other social services, is the rising affluence of the country, the means exist to meet these

costs. It is inescapable, however, that these should be met from sources of public income that rise hand-in-hand with increases in the gross national product. Public libraries and school libraries are now financed primarily from local real estate taxes, which are inelastic and respond very slowly to increases in national income; many college and university libraries are heavily dependent on endowment income and student fees, which are also capable of only limited increase. The role of State support for many of these types of libraries has been substantially enlarged and should be further increased as a partial response to the inflexibility of other sources of support. Even State income, however, based as it is largely on low income taxes and sales taxes, responds relatively slowly to rises in the general level of productivity and is critically low in just those states especially in need of large-scale expansion of library services.

For all these reasons, the Commission believes that over the coming decade very large increases in Federal support of libraries will be necessary and, indeed, inescapable. Even if this necessity did not exist, however, there would be ample justification for an increase in the Federal component of library support. The problem of research libraries is peculiarly a national one: we need to develop national centers of research collections, national backstopping facilities to improve access to research materials, national plans for coordination, national catalogs and bibliographies, and other apparatus that will improve the accessibility of relevant information. The employment of the newer information technology in libraries—including research to develop its applications, the formulation of uniform or compatible information storage and retrieval systems, and the creation of library networks—are also inescapably national problems whose solutions require national participation and support.

Even on the level of local school and public libraries, there is a great and distinct national interest. Especially with a population so mobile as that of the United States, the whole nation must have a concern for the level of educational and informational services throughout the country. Illiteracy, ignorance, limited education, and lack of vocational skills, and other poverty-engendering deprivations, wherever originating, spread their impact by migration and otherwise throughout the country. Library development is an essential element in such national objectives as the elimination of poverty and the achievement of rapid social and economic development, and it requires and deserves national support.

As for the effective utilization of funds already available for the construction and support of libraries and library services, it should be pointed out that, during the life of the Commission, the Federal contribution to libraries had just been greatly expanded under the Elementary and Secondary

Education Act of 1965 and the Higher Education Act of 1965 (P.L. 89-329, P.L. 90-35, P.L. 90-82), and appropriate procedures and staffing were still being worked out. There was some inevitable confusion and it is too early to reach dependable judgments about the efficiency of the Federal program. In general, however, the Commission hopes that the administration of these acts may be moving toward the quite high level of efficiency already achieved in the administration of the Library Services and Construction Act (P.L. 88-269, P.L. 89-511, P.L. 90-154) and the library components (Titles III and XI) of the National Defense Education Act (P.L. 88-665).

There are, however, some fundamental weaknesses in the present pattern of Federal library support:

a. It is given under a large number of different acts in addition to the four mentioned above. Some such diffusion is inevitable, and even to some degree desirable since it would be unwise to pull library components out of many different Federal programs and put them into one act, thus separating library support from the objectives it is intended to serve. But there is substantial overlapping and lack of coordination among these different acts at present, and they have not been planned as part of a comprehensive whole.

b. There is no program of Federal support for research libraries as such.

c. There is no central program for the development of the newer information technology and its application to libraries.

d. Although manpower is a most critical library problem, Federal support has been almost wholly given to buildings and materials, with limited support for training and almost none for salaries.

e. Effective employment of Federal funds within the States, especially for school and public libraries, and effective State support both depend on strong State library planning and administrative services, which do not always exist.

The National Advisory Commission on Libraries has stated in this Report a number of conclusions and recommendations to strengthen these aspects of Federal support. Particularly relevant in this respect are the permanent National Commission on Libraries and Information Science to undertake broad central planning toward coordination; a central Federal Institute of Library and Information Science for research and development; aid to research libraries as well as other libraries; improved manpower recruitment, training, and utilization; and strengthening of State libraries. The Commission believes the adoption of these approaches would substantially improve both the efficiency and the effectiveness of library funding and the use of Federal funds.

#### *The criterion of social value*

In retrospect, examining the objectives and recommendations presented in this Report in

relation to the original charge, the National Advisory Commission on Libraries believes that questions now unanswered will yield to the diverse approaches and interlinked continuing bodies recommended. There clearly already are, and will continue to be, many challenging problems for the scrutiny of the continuing National Commission on Libraries and Information Science—the very fact that the present Commission, in only the few months since completion of its preliminary Report, has developed additional conclusions and recommendations for the present Report is encouraging evidence of the validity of the commission function in overall planning and advising.

One theme emerges throughout all the activities of the National Advisory Commission on Libraries since its first meeting in November 1966. This is a strong social-benefit awareness, a service orientation that pervades every existing and conceivable library and information function. Perhaps it is not too soon to propose the criterion of social value as the most important in decision-making—whether for broad central planning, more specific planning, or immediate problem-solving. We should look at the value to our people and our culture that accrues from the activities of the user whose functions are to be enhanced by improved availability of library and information services. A library can be understood only as it enhances a socially valuable function, one of which—and one that all libraries can enhance—is the personal intellectual and ethical development of every individual in our society. The variety of the other socially valuable functions determines the need for variety in kinds of libraries.

In this spirit of social awareness, the National Advisory Commission on Libraries developed its recommendations for a National Library Policy, presented in the following chapter.

#### CHAPTER 2. A NATIONAL LIBRARY POLICY

Recommendation: That it be declared National Policy, enunciated by the President and enacted into law by the Congress, that the American people should be provided with library and informational services adequate to their needs, and that the Federal Government, in collaboration with State and local governments and private agencies, should exercise leadership in assuring the provision of such services.

Increasingly over the years the need for a national library policy has become apparent—a policy which could permit plans that take into consideration the needs for library service of the American people as a whole. Recent developments which have profoundly affected not only the supply and the use of informational materials, but also the way in which information is used, have made the recognition of this need inescapable.

As long ago as circa 1730, when Benjamin Franklin and his youthful colleagues were establishing what was perhaps the first com-

munal library in the American colonies, he gave expression to the basic principle of modern library service. By "clubbing our books to a common library," he wrote, each member had "the advantage of using the books of all the other members, which would be nearly as beneficial as if each owned the whole." Today, some Americans share the use of collections of millions of volumes, while others still lack access even to meager and deficient library facilities.

By the end of the 19th century the country possessed many thousands of academic, public, and other libraries, all based on Benjamin Franklin's principle of clubbing. These libraries were all more or less self-sufficient institutions, necessarily limited by their local resources, but providing important services to local communities of users. But the need for more broadly based services was already recognized and growing, and inter-library lending, union catalogs, and other products of interlibrary cooperation were responding to this need.

During the next 50 years, however, it became clear that the library needs of the country could not be met merely by cooperation between independent units having local responsibilities. Several of the State governments led the way in developing regional library services organized around their State libraries, while increasingly through the period the libraries of the country were taking advantage of central services—of which the Library of Congress catalog-card system is the archetype—for reducing their costs and increasing their effectiveness. Finally, in 1956, in the Library Services Act (P.L. 597), Congress took a major step to enable the Federal Government, in collaboration with the States, to extend public library services to that third of the nation's population, mainly in rural areas, that still lacked them.

That Act was just in time. Since 1956 the accelerated momentum of events has made cumulative demands upon the libraries of the country which they were quite unprepared to meet, but the experience gained under the Library Services Act has proved invaluable for suggesting methods for meeting library problems.

It is now clear that library services are needed, to greater or less extent, directly or indirectly, by the entire citizenry of the country. Such services are increasingly essential for education, scholarship, and private inquiry; for research, development, commerce, industry, national defense, and the arts; for individual and community enrichment; for knowledge alike of the natural world and of man—in short, for the continuity of civilization on the one hand and increasingly for the preservation of man's place in nature on the other.

It is also now clear that these needs can no longer be met by spontaneous independent institutions having merely local responsibilities and claiming merely local support, no matter how willing they may be to assist. Indeed, these institutions through the years

are persistently further and further from self-sufficiency and increasingly dependent upon the services of external bodies—public and private, State and Federal, domestic and foreign—without which their costs would skyrocket and their services diminish.

A principal reason for this exists in the sheer mass of new information continuously being added to the existing stock as a result of the ceaseless probings of scholarship and research—information which is requisite for the increasingly complex activities of civilization and of modern communities, yet which is beyond the capacity of individual libraries to acquire, organize, store, search, and make available for service. For the efficient handling of this information, a system of specialized agencies is needed. Elements of such an arrangement actually do exist, but on an unplanned and spontaneous basis. The situation requires rationalization through the execution of careful plans in the national interest.

There are other reasons why libraries can less and less attempt to serve as self-sufficient entities but must more and more derive strength from membership in regional or national systems or networks. One of these is the increasing mobility both of people and of industry—a mobility that tends not only to diversify, but also to intensify the demands upon local libraries for specialized materials. Another is the enormous increase in personnel costs that all service organizations, including libraries, are forced to sustain, costs that compel them wherever possible to substitute mechanisms and automations for manual operations. A special aspect of this process is the inevitable impact of electronic technology on information transfer—a process already under way in the development of methods for storage of information in electronic memories, processing by computer, distribution by wire or microwave, and service to the consumer by telefacsimile or cathode-ray-tube display.

To avoid haphazard and fragmented response to the inevitable forces of a changing society, a national plan is required that can be used to guide the next steps of all participants toward a recognized and achievable goal of adequate library service to all Americans. Because of the deep involvement of the Federal Government as producer, processor, and user of information, and because this is a matter closely touching the national welfare, the leadership of the Federal Government is essential to the success of any plan.

A prerequisite to the development of such a plan is a clear enunciation of the policy on which the plan is to be based. In consequence, the first recommendation of the National Advisory Commission on Libraries, on which all its further recommendations rest, is that it be declared National Policy, enunciated by the President and enacted into law by the Congress, that the American people should be provided with library and informational services adequate to their needs, and that the

Federal Government, in collaboration with State and local governments and private agencies, should exercise leadership in assuring the provision of such services.

#### *The international dimension*

A National Library Policy for meeting the needs of our own citizens does not preclude an international awareness and responsibility. In fact a national policy statement on international book and library activities already exists—it was approved by the President on January 4, 1967. Subsequent directives to government agencies have further elucidated this policy for the encouragement of education through exchanges of books and of teachers and students, fostering indigenous book publishing and distribution facilities, support for programs of library development, training programs for library personnel, liaison between American and foreign libraries, increased exchange of reference and bibliographic information, and joint undertakings in the development of library technology.

The National Advisory Commission on Libraries shares the enthusiasm of the library profession toward achieving these goals and urges the appropriation of funds to implement the International Education Act (P.L. 89-698). The Commission also commends the idea of a clearinghouse at the Library of Congress to which foreign scholars and libraries might apply for needed publications.

The contribution of our library profession and our libraries to the improvement of international relations over the years has been noteworthy. Their acquisitions programs have attempted to develop rich resources of information from all parts of the world to meet the ever increasing needs of our citizens. They have aided in the work of creating understanding of our society and our policies by making publications of the United States available to libraries abroad. They have participated on a continuing basis in the work of international library associations and of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in its program of fostering education and librarianship abroad, and they have helped restore libraries ravaged by war and natural disasters.

Today, when it is clearly in our national interest to help the emerging countries develop progressive educational systems and provide a basis, through education and knowledge, for peaceful coexistence in the community of nations, the American library profession can—through participation in both publicly and privately supported efforts—make a greater contribution than ever before.

The United States can demonstrate to the world that we support our convictions regarding intellectual freedom by providing free access to all types of information and all shades of opinion for all citizens. Our libraries can strive to become a vital positive force in the social and intellectual recon-

struction of a broadening and changing society. The National Advisory Commission on Libraries believes that the basic first step for the Federal Government is to state a National Library Policy toward the provision of services truly adequate to the nation's needs.

#### CHAPTER 3. OBJECTIVES FOR OVERCOMING CURRENT INADEQUACIES

In order to fulfill the National Policy and provide library and informational services adequate to the nation's needs, current inadequacies must be faced. The purpose of this chapter is to discuss some areas where objectives are needed: where existing deficiencies threaten to undermine the success of any coherent development into the future. These deficiencies already severely limit or deny effective access to libraries and relevant knowledge for many individuals, but the situation can and must be remedied. A variety of complex responses and changes are required, and these responses and changes need to be developed in a sustained, consistent, and evolutionary manner over a period of time—and with a substantial degree of Federal leadership and participation. The National Advisory Commission on Libraries recommends that immediate national attention be given to six broad and fundamental objectives. The long-range development of an adequate library and information system will be dependent to a large degree on the achievement of these objectives.

##### *Formal education at all levels*

Objective: Provide adequate library and informational services for formal education at all levels.

First of all, we must reduce some serious current deficiencies in those libraries serving not only every level of formal education, but also the increasingly blurred boundary lines between these levels.<sup>1</sup> School library deficiencies, labeled "a national disgrace" by former Commissioner of Education, Francis Keppel, have truly serious consequences for our entire system of education. The habit of reading, skill in reading, and skill in identifying and using pertinent information are vital in the learning process, in dealing with concepts, in making wise judgments, in pursuing a vocation or profession, in extending the frontiers of knowledge, and in the liberation and extension of the mind of man.

Recent Federal legislation has already had visible impact on elementary and secondary school library development, in part by encouraging much greater local effort in library improvement. Nevertheless, and in spite of differences from one system to another, the needs of our schools in general for books and other library materials, for adequate physical facilities in which to house libraries, and

<sup>1</sup> As evidenced, for example, by such phenomena as advanced-placement credit for college-level courses taken in high school and early-entrance programs to professional education.

for staff are so enormous that continued Federal assistance is necessary. The Commission believes that appropriations for school library resources should be increased as soon as possible to at least the full amount authorized by the Elementary and Secondary Education Act of 1965 (P.L. 89-10, P.L. 89-750). At this time some school buildings have no libraries in any sense of the word; too often meager materials are housed with notable inadequacy. Provision for libraries should be made mandatory in any Federal legislation supporting the construction of new school buildings or the expansion of existing buildings that do not already have adequate library facilities. It should be noted that libraries in schools serving educationally deprived children appear to be extremely deficient, and it would be advisable to bolster the library assistance provided by the Elementary and Secondary Education Act with supplementary legislation to help solve this problem in our large cities where so many disadvantaged children reside. To provide for a more efficient use of materials, equipment, and personnel, local and State school library agencies should be further encouraged to form community and regional systems to provide centralized consultation and acquisitions and processing services for school library materials.

The implementation of a national plan to raise elementary and secondary school libraries to full and continuing adequacy will require far better data on school libraries than are now available. Investigations should also be undertaken on the relative cost and utility of the various types of library materials, which are often indistinguishable from instructional materials; on differing patterns of service, supervision, and library organization; on appropriate standards; on the various means of coordinating school library districts to provide centralized consultant, processing, and materials-evaluation services; and on the means of stimulating the production of special library materials for students and preschool children in disadvantaged or bilingual communities, where children lack the preschool preparation and relative linguistic and cultural sophistication of children from middle-class American families.

One of the most complex problems that will have to be resolved in any national planning for genuine adequacy of library service to the total span of education relates to the difficulty of coordinating the various library agencies that serve high school and college students in urban areas. Because high schools, urban colleges, and junior colleges are often remote from areas where many of their students reside, and because it is frequently difficult and costly to provide the maintenance services necessary to keep the school library open evenings and weekends, and because the school collections are often inadequate to the needs, students have been resorting to their local public libraries in

such large numbers as seriously to overload the public library. Coordination of public library directors, teachers, school principals, and various librarians within different geographic jurisdictions is not an easy administrative matter, but evidence suggests that there is a serious lack of such coordination even within areas where the jurisdictional boundaries of the public library and school library systems coincide. New thinking and planning are critically needed regarding the distribution of responsibility and financial support to the various types of libraries within each region if we are to serve the increasing demands of formal education.

As college enrollments have increased since World War II, we have witnessed an almost phenomenal increase in the number of junior and community colleges. In no other type of institution serving higher education are library shortcomings so glaring. The great majority of library collections of junior colleges are considered substandard, and a high percentage of the libraries of four-year colleges are also weak. Of all the difficulties that beset the college library, the most visible is that of inadequacy of library buildings. The Higher Education Facilities Act of 1963 (P.L. 88-204, as amended) has been a tremendous stimulus and support for college library construction. Substantial amounts have been granted under this Act for undergraduate college library buildings, but in many instances the combination of Federal aid and local resources has led only to an alleviation of the pressing immediate need for more library space, and not to solutions viable for long periods.

The National Advisory Commission on Libraries believes it to be of great national importance that the libraries serving the undergraduate students and facilities of our two-year and four-year colleges, and also the undergraduate colleges in our universities, be equipped and staffed to do their jobs with full adequacy. To help achieve this goal, the Commission believes that sums appropriated under the authority of the Higher Education Act of 1965 to strengthen the collections of college libraries should be increased substantially, and in the administration of grants for this purpose, special attention should be given to improvement of the collections of the two-year and four-year colleges that are most seriously in need. Additionally, the limitation on grants for the construction of academic library buildings under the Higher Education Facilities Act of 1963 (P.L. 88-204 as amended) should be raised to permit a Federal contribution of three fourths of the construction cost, as provided, for example, in the Medical Library Assistance Act (P.L. 89-291).

For long-range college library development, plans should be developed for centralized services to college libraries in acquisitions, processing, and storage of little-used material; in effecting cooperative arrangements that will give college students and faculty

members efficient bibliographic and physical access to the resources of research libraries; in arranging for advisory services to college librarians, especially with respect to the utilization of technological aids to library work; and in persuading the States and other responsible agencies that adequate libraries are essential rather than marginal or optional facilities.

As formal education progresses into graduate and professional schools of the university and the continuing education of practitioners, the informational needs become more complex and the boundary lines between education and research become blurred. Inadequacies in serving the nation's research needs are discussed later in this chapter under other objectives, but it is appropriate to point out here that a dynamic relationship exists between all the areas for which the National Advisory Commission on Libraries has identified inadequacies and suggested objectives.

#### *The public at large*

Objective: Provide adequate library and informational services for the public at large.

Serving the informal educational needs at all levels might well be the stated function of the only libraries to which the undifferentiated general public has access today—the public libraries. There are inadequacies here too, and there are strong arguments for overcoming these in order to strengthen the health of our democracy.

The public library reaches the entire population as does no other aspect of library service. Parents of preschool children rely on it for the picture and storybooks that are the child's first introduction to the mystery of reading. Elementary school children go to the public library for books when school is out and during vacation, as do high school students, who also use it for assistance in homework and term papers. Urban college students living at home find the public library more convenient than their college libraries. Adults rely on it for recreation and continuing education. Businessmen may turn to it for practical information, as do housewives, craftsmen, and hobbyists. The larger public libraries are major research resources. More recently we have turned to the library as one of the social agencies needed to assist in liberating the prisoners of urban ghettos from ignorance and poverty. For all men and women, it is the one place through which they may reach the world's collected informational and intellectual resources.

Yet, important as the public library is, there are few social services so unequally provided to the American people. Residents of some cities can command the resources of enormous institutions holding many hundreds of thousands, or even millions, of volumes. At the other extreme, some 20 million Americans, largely in rural areas, have no public library service at all, and some 10 million more have access only to very small libraries with very inadequate collections

and little or no service from professional librarians. Indeed, only residents of cities of substantial size or of areas served by well-sustained county or regional library systems are likely to have access to reasonably adequate library service. It is essential that measures be taken to extend at least basic local public library service to every American. The encouragement of library systems, interlibrary loans, and other similar approaches can give everyone ultimate access to all the library resources he needs.

The unequal distribution of service is not the only inadequacy. Even where public library service is available, indeed even in some of the better served cities, it is usually far below any reasonable standard of adequacy. More than two thirds of all public libraries fail to meet American Library Association (ALA) standards as to the minimum adequate size of collections, and not one in 30 meets ALA standards for per-capita financial support.

There are a number of other quite critical problems in current public library services. One is the heavy burden of high school and college student use of the public library. This pressure will in part be relieved as the educational libraries are strengthened. But students turn to the public library not only because of its relative strength, but because of its convenience. This motive will not be lessened by the improvement of a high school library, for it may still be closed on evenings and weekends, or by the improvement of a college library that may be distant from a student's home. Diverting students away from the public library would deprive them of definite conveniences. The desirable objective would be to assist the public library in developing the means to meet the pressure and serve the student better. Public libraries need to be included in programs of assistance to educational libraries.

Another special problem, shared by many urban services, arises from the fact that patterns of public library service in metropolitan areas by no means correspond to the pattern of local governmental jurisdiction. In particular, the public library of the central city may be called on to render service to residents of the entire metropolitan area, without any financial support from suburban jurisdictions. The situation is doubly complicated when the metropolitan area, as in several of our large cities, extends across state lines. Further means of support and coordination must be found.

Still other problems stem from the fact that the nature of the informational and reading needs of the residents of core cities has radically changed in the last decade, so radically as to require substantial changes in the outlook, collections, and services of the core-city branches of urban public libraries if they are to become effective instruments in the attack on poverty, ignorance, and semilliteracy. The public libraries require assistance, financial and professional, in equipping themselves to meet these new needs.



One of the principal tasks of the National Commission on Libraries and Information Science, proposed in Chapter 4, should be to develop a national plan, calling on Federal, State, and local sources of support for making adequate public libraries service available to all Americans. Such a plan should give special attention to the problems of large cities with difficult educational problems, of metropolitan areas with multiple jurisdictions, and of rural areas entirely or almost entirely lacking public library services. The planning give attention to the coordination of school, college, and public library services. It should consider arrangements for the maximum use of cooperative library systems, and assure compensation to larger or more specialized libraries—public or private—when they give service to such systems that extends beyond the demands of their normal clientele. The National Advisory Commission on Libraries believes the plan should provide for substantially increased levels of support on a matching-fund basis.

The term "public library" includes county libraries serving townships without libraries, or with very inadequate ones, and State libraries. State libraries support the public library system in their respective States and provide assistance to school libraries. They are entrusted, usually, with planning State library systems and with the administration of State aid to public libraries. In some instances they are required to provide legal collections and other resources necessary for the work of State government. The deficiencies some State library agencies face are so severe that one recommendation of the National Advisory Commission on Libraries is specifically directed to this problem area.

#### *Research in all fields at all levels*

Objective: Provide materials to support research in all fields at all levels.

A third broad national goal must be the development and implementation of a plan that will insure that the nation has the research resources required for its increasingly complex informational and research needs. The publication of new books and new editions of older titles (exclusive of government publications, dissertations, pamphlets, and most subscription books) doubled between 1950 and 1966. The growth of knowledge and the phenomenal increase in its use is reflected not only in the increased production of books, but in the proliferation of such information-bearing records as journals, research reports, dissertations, microfilms, audiorecordings, and other materials. Increases in the use of all publications are difficult to assess, but a recent report states that the use of scientific literature has been increasing by 12 to 17 percent per year. In addition, there are major new areas of research concern (such as Asia, Africa, the Middle East, and Eastern Europe) requiring acquisitions programs for large quantities of material that are very costly, very difficult to acquire,

and very expensive to catalog and organize for effective use.

The increase in research conducted by universities and sponsored by Federal and State agencies, corporations, and foundations, has made demands upon university libraries that have not been satisfied by either the growth of library collections or staffs. All agencies of government, foundations, industries, and other organizations that subsidize research by contracts, grants-in-aid, fellowships, and other means should be made aware of the greatly augmented burden on the library that their grants and subventions commonly entail. This should be taken into account in the planning of grants and programs. Continuity of such funding is critically important.

Although many libraries share in carrying the burden of acquiring, organizing, and servicing this vast body of material for the nation, the principal burden at the present time falls upon a relatively small number of university libraries, the three great national libraries (the Library of Congress, the National Library of Medicine, and the National Agricultural Library), and a number of very large public libraries and privately supported research libraries. Rapid increases in the costs and scope of required publications and of the staffs for handling them, as well as the added needs for sufficient space, are severely straining the very limited resources of all these institutions. Existing programs of Federal assistance are not in general addressed to the development or the accessibility of research materials. It is essential to develop and fund a more systematic and comprehensive national program to assist these libraries in the acquisition, organization, housing, and servicing of materials likely to be of research value to the nation.

Research, basic or applied, requires source materials and itself produces new informational output—this is true of the arts and humanities as well as the natural and physical sciences, the social and behavioral sciences, and many technical areas. As society continues to demand both new knowledge and more rapid application of knowledge for its own betterment, the proliferation of information may defeat its own purpose unless it is adequately recorded, acquired, and available for use.

#### *Bibliographic access*

Objective: Provide adequate bibliographic access to the nation's research and informational resources.

It is not enough simply to acquire research and informational resources. To insure that their existence and relevance will be known to those who need them, an adequate apparatus for indexing, cataloging, abstracting, and evaluating their content must be developed.

The work of bibliographic organization of vast collections of books and other materials, and of providing the tools that permit any

user to determine their location quickly, grows in complexity with every volume added to the collections and with the proliferation in the sources, the subjects, the languages, and the forms in which pertinent materials appear. Under the Higher Education Act of 1965 (P.L. 89-329, P.L. 90-35, P.L. 90-82), funds totaling \$3 million were provided in 1967 to enable the Library of Congress to expand its acquisitions and cataloging program in an effort to provide cataloging data for any foreign book that an American library might purchase. This appropriation has now been increased substantially and the program, if sustained, may prove to be the most far-reaching service to scholarly and many other national bibliographic needs of all Federal library undertakings.

At present the technology of electronically storing, updating, querying, and transmitting bibliographic data is emerging. In Chapter 4, the National Advisory Commission on Libraries sets forth its recommendation for a vigorous program of research and development leading toward national networks that will provide better access to improved bibliographic and related services.

Bibliographic access to the content of the many thousands of journals and research reports in our libraries is inadequate and uneven. There is no agency: (1) to initiate and develop national technical standards that could help to insure coverage of all journals contributing to the total research effort, (2) to coordinate the work of various association-supported, governmental, and commercial enterprises, and (3) to assist in determining priorities in funding.

Despite the seeming wealth of service of all kinds to assist in providing bibliographic access to information in the sciences and technology, several deficiencies in the present pattern are obvious. Except for medicine, agriculture, and the Library of Congress, the responsibility of the Government agencies for coverage is naturally based primarily on the particular objectives and literature requirements of the agency. The commercial services respond only to demonstrably large-scale need in special fields, and the work of the various scientific associations is not well coordinated. As a consequence, there are both extensive overlapping of effort and tremendous gaps in coverage. Moreover, a proprietary attitude in both the Government agencies and the scientific societies as regards their bibliographic products is a natural consequence of their desire to satisfy the special requirements of their users.

There is no direction by any national agency concerned with the total information problem. As separate services proliferate, grow, and succeed, the prospect for standardization and compatibility diminishes. There is clearly a need for national planning and coordination to insure, for all subject fields, including the humanities and social and behavioral sciences, adequate systems of bibliographical control.

### *Physical access*

Objective: Provide adequate physical access to required materials or their texts throughout the nation.

Plans to strengthen national holdings of research resources and their effective subject or bibliographical control must also provide for effective physical access to the texts themselves. Even the largest research, university, corporate, or Federal library cannot hope to achieve self-sufficiency, despite the fact that it must possess library resources adequate for all but the most unusual needs of its staff or constituency. As the college library looks to the university library in its locality, so must the university library depend on the holdings of other institutions and the national libraries to satisfy requests for publications that it has not acquired. The public library, in turn, may look to State library agencies, other public libraries, or to academic libraries for materials needed by readers.

The demands for research information extend far beyond the requirements of scholars employed at universities. Industry must be able to draw upon the resources that our university libraries offer, since the duplication of their holdings in the depth and extent necessary for many industrial research purposes is almost inconceivable. Moreover, the needs of governmental agencies at all levels, of the professions, of the private scholar, all require access to research and other information not necessarily available in the immediate vicinity. Means must be found to make the full text of documents available in some suitable form and at locations convenient to all users, with minimum delay and at manageable and equitably distributed costs. The problems of physical access are likely to be further complicated in future unless efforts are made to discourage the continued use of book paper with a rapid rate of deterioration.

The present cooperative arrangements between libraries to make materials available are slow and inefficient and are costly to the relatively small number of libraries that are called upon to provide a major part of this service without recompense. Furthermore, the present difficulties in the way of interinstitutional physical access to publications forces research and other libraries, at high cost, to acquire, catalog, and house large amounts of little-used materials. These costs might be significantly reduced if new and effective patterns of joint physical access to materials can be developed. It is apparent that national, regional, and State planning is needed to facilitate physical access to publications generally, utilizing any technological aids that it is feasible to employ.

Such planning will obviously entail: (1) support from Federal, State, and other sources for improvement of interlibrary loan and copying services, which the research and certain other libraries can no longer provide gratuitously at high cost to themselves; (2) the establishment of regional library net-

works and of resource libraries to serve them; and (3) support for agencies, such as the Center for Research Libraries, which should have Federal assistance in their efforts to serve research and informational needs in all parts of the country. Finally, it will be important in the public interest, whether under the present copyright law or any revision that may be adopted, that arrangements for the protection of copyright proprietors do not unreasonably hinder access to and use of information.

#### *Library manpower*

Objective: Provide adequate trained personnel for the varied and changing demands of librarianship.

Recent analyses undertaken by the library profession, as well as the testimony of almost all witnesses before the National Advisory Commission on Libraries, indicate that the problem of manpower shortage in our libraries is of such critical severity as to merit its being singled out for special mention. All estimates of the number of professional personnel needed to fill existing vacancies and for normal attrition of staff in public, academic, and special libraries exceed the number of librarians graduated each year by the 42 accredited schools of librarianship in the United States and Canada. With respect to the provision of librarians qualified for positions in elementary and secondary school libraries, the situation is even more unsatisfactory.

Before the library profession can hope to enroll the requisite number of persons for training in the schools of librarianship, a variety of obstacles must be overcome. First, librarianship should be made more attractive as a career for men as well as for women. As is true of most professions in which women predominate at the lower and middle levels of responsibility, the prestige of librarianship as a whole is lower in the public view than it deserves to be, and the financial rewards are less tempting than in many other professions that require professional education. General public ignorance of the variety of interesting specialized career opportunities within the broad field of librarianship also make recruitment difficult. A further handicap is the discrepancy between the status, salaries, and fringe benefits accorded the librarians of many academic institutions and those available to their colleagues employed in teaching and research. Finally, there is a long tradition of recruitment for librarianship among only the humanistically oriented college students. Too few scientifically oriented young people understand that the profession of librarianship embraces all categories of specialists who mediate between the sources of recorded information and the people who need access to information in all subject fields and at all levels of sophistication.

A second major obstacle is the inadequacy of the 42 accredited graduate schools of librarianship in the United States and

Canada with respect to financial support for staff and physical facilities. It is not known how many qualified applicants for library training may be lost for this reason. To complicate matters still further, all schools of librarianship contend with a shortage of qualified teachers, with a scarcity of fellowships to encourage the advanced study requisite for the preparation of future faculty, and with inadequate support for workshops, institutes, and other programs to enhance the competence of librarians already employed and help them adjust to changing demands. Equally important is the inadequacy of support for working librarians who wish to take advantage of opportunities for specialized training or advanced training when these do exist.

Paralleling these dilemmas is the slowness of the library profession itself in achieving agreement regarding the nature and extent of education or training needed for employment in the various specializations of librarianship, and in enlisting more fully the aid of the various disciplines of the social, behavioral, and applied sciences in preparing library science students for the changing requirements of library management and for the evolving role of the library in our society.

The resolution of library and information science manpower problems will be difficult, but they can yield to a number of specific measures. First, the library profession should undertake a program of ongoing research in librarianship in order to improve functional efficiency and facilitate the establishment of the variety of training programs needed now and in the future. Research in library education itself should be encouraged, as well as curricular experimentation.

Second, library administrators should employ every effort to make all professional library work intellectually and socially challenging to retain the best minds that enter the profession.

Third, the Federal Government, which has already acknowledged its responsibility for the improvement of library service under its constitutional mandate on the general welfare, should assist the profession through a number of undertakings. The United States Office of Education should analyze the library personnel situation on a regular basis, compare it with standards established by itself or the library associations, and publish its findings. It should, further, maintain a clearinghouse of information on all innovations in library education and training and on all efforts of libraries to make more efficient use of personnel. Further, the Office of Education should provide advisory aid to library schools, library associations, and others interested in recruiting people to library work in adequate numbers to carry out the various existing and emerging specialized tasks required.

To assist the library profession, the proposed National Commission on Libraries and Information Science should give high pri-

ority to an exploration of professional education and training, including experimentation with alternate modes of library training. The Commission should assist also with achieving improved salary scales and providing better promotional possibilities to make librarianship more attractive as a career.

Finally, Federal assistance in developing library personnel should be provided: (1) by direct aid to schools offering graduate and undergraduate training, postgraduate inservice training, and refresher courses; (2) by aid in the publication of suitable texts for such training; (3) by support of special programs to train potential teachers of librarianship; and (4) by greatly increased provision of funds for fellowships for undergraduate, graduate, and special library training.

### *Conclusion*

These, then, are six areas where current inadequacies exist, and future inadequacies are foreseen unless all participants in the management and use of information can look to coherent national planning and coordinated research and development. The nation's needs for library and information service can be expressed in terms of the need to serve formal education, the public at large, and research of all kinds. The need to provide appropriate ways of locating information (bibliographic access) and acquiring it for use (physical access) is basic. Manpower is a pervasive and very urgent problem area. The six interrelated objectives discussed above form the context for the recommendations of the National Advisory Commission on Libraries set forth in Chapter 4.

### CHAPTER 4. RECOMMENDATIONS FOR ACHIEVING THE OBJECTIVES

In order to serve the needs of education at all levels, the general public in all its diversity, and research in all fields of knowledge, the problems of access to continually burgeoning information and efficient utilization of manpower must be resolved. Some dilemmas are immediately pressing and can be handled by immediate action. Other dilemmas are foreseen as still emerging over the transition period to the long future, and thus provision must be made for constant adaptation to inevitably changing needs and improved understanding of these needs. The National Advisory Commission on Libraries believes the five recommendations discussed below provide both a sound base for the future and a realistic means of coping with current inadequacies.

#### *National Commission on Libraries and Information Science*

**Recommendation:** Establishment of a National Commission on Libraries and Information Science as a continuing Federal planning agency.

In order to implement and further develop the national policy of library services for the nation's needs, the most important single measure that can be undertaken is the estab-

lishment of a continuing Federal planning agency. It is noteworthy that almost all representatives of library, scholarly, scientific, and other professional associations who testified before the National Advisory Commission on Libraries gave high priority in their recommendations to the creation of such a Federal planning agency. The present Commission's efforts to analyze current and future national library needs, assess the strengths and weaknesses of existing library resources and services, and evaluate the effects of library legislation, leave the members with the absolute conviction that the goal of library adequacy will be achieved only as a consequence of long-range planning and fostering of the evolutionary process of library development. This will require taking advantage of present and emerging knowledge in information science; it will require encouraging and exploiting future research.

The proposed National Commission should be charged with the responsibility of preparing full-scale plans to deal with the nation's library and information needs, and for advising the Federal Government and other agencies, institutions, and groups—both public and private, with respect to those needs. It should be empowered to conduct, or have conducted, such studies and analyses as are necessary for the fulfillment of its responsibilities; it should have ready access to information relevant to its purposes from other Government agencies concerned with library and information services; and it should be empowered to recommend legislation which is needed to enhance and strengthen the nation's library and information services.

The National Commission should be established by the Congress. Its members should be appointed by the President with the advice and consent of the Senate. The National Commission should report at least once a year to the President and to the Congress on its activities, recommendations, and plans in the areas of its responsibility and concern. This report should be published.

The present National Advisory Commission on Libraries recommends that this proposed National Commission on Libraries and Information Science be constituted of not more than 15 private citizens of distinction. This group shall include, but not necessarily be restricted to, persons competent in the library and information science professions. The Chairman should be appointed by the President from among its members. A rotating, staggered membership is suggested so that individuals serve for a term of five or six years.

To accomplish its complex and broad mission the National Commission should be provided with a staff adequate in number and strong in expertise, and with funds sufficient to enable it to exercise the extensive research and planning functions which will be necessary if it is to provide sound advice to the President and the Congress. A suggested location appropriate for the National Com-

mission on Libraries and Information Science is in the Office of the Secretary of Health, Education, and Welfare.

*The Library of Congress: The National Library of the United States*

Recommendation: Recognition and strengthening of the role of the Library of Congress as the National Library of the United States and establishment of a Board of Advisers.

The National Advisory Commission on Libraries believes that the role of the Library of Congress as the National Library of the United States should be recognized and strengthened, and it specifically recommends:

1. That the Congress define the responsibilities of the Library of Congress as follows: (a) to serve as the principal reference and research arm of the Congress, thus serving the nation through this body; (b) to assemble, maintain, and provide national availability for comprehensive national research collections of materials from all countries and in all fields of knowledge, except those for which the National Library of Medicine and the National Agricultural Library have accepted responsibility; (c) to catalog these materials promptly and offer its catalog cards for sale to other libraries; and (d) to provide basic national bibliographical, reference, and copyright services. The Commission suggests that these functions of the Library of Congress, already largely exercised in fact, should be further recognized by adding an appropriate phrase to its title, so that its formal designation would be: "The Library of Congress: The National Library of the United States."

2. That a Board of Advisers to the Library of Congress be created. Its chairman and members should be drawn from the public, including scholarly and research organizations, the scientific community, universities and colleges, and research librarianship, and they should be appointed by the President of the Senate and the Speaker of the House of Representatives. The recommended functions of this proposed Board of Advisers are to review the Library's operations and services and to advise the Librarian of Congress—and, as desired, the appropriate Committees of Congress—on matters that would assist the Library in the development of its collections and the performance of its national services. The Board should be required to prepare and submit an annual report to the Congress and to the Librarian of Congress. This report should be published.

The rationale for the Commission's conclusions lies chiefly in the fact that, by far-reaching legislation and generous appropriations over the last 70 years, the Congress has created in the Library of Congress perhaps the greatest of the world's national libraries. It has the principal national research collections in most fields of knowledge, except of course those served by its two companion national institutions, the National Library of Medicine and the Na-

tional Agricultural Library. It is a source of last resort to which other libraries can turn for inter-library loans and for microfilms of materials. It provides a means of acquisitions, for other libraries' collections as well as for its own, of public documents and other research materials not available through the book trade, especially from Asia, Africa, Latin and South America, and Eastern Europe.

The catalog cards of the Library of Congress provide a basis for the catalogs of most American libraries. The Library houses and maintains the *National Union Catalog*, one of the greatest and most nearly indispensable of our bibliographical tools. The publication of its own catalogs in book form has provided a major reference resource for libraries here and abroad. Many of its other bibliographic services have become essential to research libraries and to scholars. Since 1948 the Library of Congress has published the best continuing bibliography of Russian books compiled outside the Soviet Union. It edits the indispensable *National Union List of Serials* and publishes regularly a list of new serial titles received by principal American and Canadian libraries. It provides the subject apparatus for the national listing of doctoral dissertations, maintains a *National Register of Microcopy Masters*, and publishes a *National Union Catalog of Manuscript Collections*.

The Library of Congress performs many other national services as well. It is the chief agency in providing Braille and "talking" books for the blind. It has undertaken major responsibility for a national program to preserve the physically deteriorating book stocks of libraries. On a contractual basis it has provided a major bibliographical and documentation service to a number of Federal agencies concerned with scientific and technological research.

The Library of Congress in general—and, in their respective fields, the National Library of Medicine and the National Agricultural Library—have the ultimate in comprehensive national research collections and provide national bibliographical services that are absolutely indispensable to research and scholarship in many fields and to the whole system of American research libraries. Comprehensive as the collections and bibliographic services of the Library of Congress now are, however, they need further strengthening in a number of areas.<sup>2</sup> This strength-

<sup>2</sup> This is true, for example, in connection with the previously mentioned acquisition and prompt central cataloging of foreign research materials not available through normal trade channels. To a considerable extent, this must now be accomplished through the transfer of funds appropriated to the United States Office of Education under Title II-C of the Higher Education Act of 1965 (P.L. 89-329) and the transfer of foreign currencies accumulated under Public Law 480.

ening of the Library of Congress through provision of a Board of Advisers, definition of the Library's responsibilities, and recognition of the role it already plays as a great national library, is the main thrust of the Commission's recommendations here.

It is a great credit to the wisdom and vision of the Congress that the Library of Congress has been so responsive to many needs. Today all the nation's requirements for library services are becoming so complex that the Library, which has never had a charter or basic constituent act defining its responsibilities, must be formally recognized for its national role and provided with advisers that can help to steer its future responsiveness.

The National Advisory Commission on Libraries does not recommend that the Library of Congress have responsibility for the development, administration, or coordination of a national library system or for the administration of programs of library assistance or grants such as those carried on by the United States Office of Education, the National Science Foundation, and other agencies. That would be a deterrent to its main function as a national library. The Commission believes that the indispensable role of the Library of Congress is in the development and availability of its unmatched collections and in its unique cataloging and bibliographic services. These should be strengthened in every possible way.

*Federal Institute of Library and Information Science*

**Recommendation:** Establishment of a Federal Institute of Library and Information Science as a principal center for basic and applied research in all relevant areas.

The National Advisory Commission on Libraries recommends that a Federal Institute of Library and Information Science be established to become a principal national center of research on library and information science in all its aspects. The Institute should have as one of its major responsibilities the system engineering and technical direction involved in the design and implementation of an integrated national library and information system, but the mission of this proposed Institute must range beyond matters of technological development and application to research into the changing needs of information users and the effectiveness of libraries and information systems in meeting these needs.

This recommendation is based on the striking contrast between the serious inadequacies of the nation's libraries and the rapid progress in the technology of information transfer. One of the great challenges of our day is to apply new technology to the operations of our libraries and thereby give each individual in our society easy and comprehensive access to the information resources he needs to make his work competent and his life meaningful.

The Commission recognizes that this goal will not be achieved by a single sweeping innovation, but rather by a succession of technical advances, some already within reach, others attainable by short-term efforts, and some approachable only through prolonged research activities. The times at which elements of new technology are introduced into specific libraries will also vary with the type of library service. Books and card files will be the mainstays of most small libraries for many years to come, but the large research libraries and a few special libraries will press for the earliest possible exploitation of new developments. Ultimately, the new technology will provide effective links from all information resources to all information users.

The uses of microfilm and document copiers are already familiar to every serious library user, even to some elementary school pupils. In the near future, gradual reduction in the costs of microfilm duplicates and full-size paper copiers will make on-demand duplication compete even more with traditional circulation of books and other materials in responding to many kinds of readers' needs. At a later time, as communication costs come down, we shall also see a more extensive adoption by libraries of telefacsimile transmission to distant users.

Of greater potential importance for future libraries than any past technical innovation will be the utilization of high-speed digital computers and their associated information-handling equipment, for the employment of computers in libraries has already led to high hopes for improved access to informational resources, in spite of the exponential growth of knowledge. Computers will most likely be applied to library operations in three successive stages. The computer has already demonstrated its usefulness as a rapid and efficient accounting device for the control of such library functions as acquisitions, circulation, serial records, and binding, as well as for general business operations; this is the first stage. Second, we are witnessing the initial successful attempts to apply the computer to bibliographic operations. The third and most exciting stage of computer involvement, which we are only beginning to approach, is the interaction between the library and the on-line computer community, in which a time-shared central computer is used as a general intellectual tool by many users working simultaneously at different terminals in a network. Development work is now in progress on the transmission of bibliographic data in such networks and on the more formidable problem of storing and transmitting the full text of documents.

In the course of time, different local networks will be interconnected and we shall see the emergence of regional, national, and international information-transfer networks. What we know today by the term "inter-library cooperation" will be superseded by a much more fluid pattern of providing access

to distant users without preventing concurrent access by local users. The evolution of these networks is the brightest promise of the new technology for libraries, but there are many technical, economic, and other problems that must be resolved before such networks can be operational.

The realization of all that is implied in this array of new technology can be achieved only by a substantial program of research and development. This Commission urges that the Federal Government should actively promote research and development in all aspects of technology as it relates to libraries and information transfer. To this end, the proposed National Commission on Libraries and Information Science should develop an integrated plan of support and cooperation involving the various Federal agencies now sponsoring such research and development work. Such a plan would greatly aid the continuation and strengthening of the current grant and contract program, which involves research and development projects at universities, private and public libraries, nonprofit research and development organizations, professional societies, and private companies.

The major Federal Institute recommended by the National Advisory Commission on Libraries can play an important role in the over-all plan. This Institute should itself undertake multidisciplinary research, development, and prototype application of all types of new technology as they relate to library and information science activities. Its program should be built on a foundation of basic research efforts directed toward better tools for the analysis of library and information requirements, quantitative measures for judging the value of existing systems and services, and an understanding of the relative value of various information-transfer media and of the role of interactive systems.

Supported by such basic investigations, the major research and development activities of the program should aim for further multidisciplinary efforts to improve library work—for example: (1) through applications of new technology for purposes of saving labor, improving speed and accuracy, maximizing convenience and dependability, reducing costs, and performing tasks previously impossible; (2) through more effective devices for organizing, storing, transmitting, displaying, and copying information; (3) through more effective organization of manpower and service units; (4) through superior understanding of the theoretical foundations of library work and of the storage, organization, and communication of knowledge; (5) through understanding, based on comprehensive studies of both users and nonusers of libraries, both as to their library requirements and also the reasons for nonuse; and (6) through the resolution of legal problems, such as those relating to the photocopying of copyrighted material.

The apex of the overall plan for research and development should be a system of inter-

connected libraries, established as a prototype network, a model for information transfer by advanced techniques. Such a network, after attaining full operational success, would become the first step in the evolution of an integrated national library system. The National Advisory Commission on Libraries recommends that the proposed Institute should be given the system engineering and technical direction responsibilities for the design and implementation of such a system.

In all planning of technological applications in library work, in all library network or systems planning, a crucial element is the development and application of national standards for the compatibility and convertibility of data systems and techniques among libraries. The proposed Institute should take a leading part in bringing about such standardization.

Administratively and organizationally, the Government can choose among many different patterns in establishing a research and development Institute of the type here contemplated. It is recommended that this Institute be established within the Office of the Secretary of Health, Education, and Welfare. It may be helpful to point out that the models that were prominent in the Commission's thinking were the National Institutes of Health and the National Laboratories of the Atomic Energy Commission.

#### *U.S. Office of Education*

Recommendation: Recognition and full acceptance of the critically important role the United States Office of Education currently plays in meeting needs for library services.

Recent legislation and Federal appropriations providing for: (1) major research programs that greatly accelerate the growth of new knowledge and (2) additional massive support for education at all levels place new and large responsibilities on the Office of Education. Its task would become even greater with the adoption of the National Advisory Commission on Libraries' proposals for a National Policy on library services for the nation's needs, the creation of a nationwide library network, and the widespread use of technological aids to improve library services.

The Commission recognizes the steps which the Office of Education has taken during this past year to strengthen and to increase the efficiency of its operations. The proposed organization of the Office's activities that affect libraries must focus on the most critical library problems: programs, professional education, facilities, research, planning, and development. In addition, the National Center for Educational Statistics must be in a position to collect on a continuing basis the pertinent and adequate library data—urgently required and not now available—for an appraisal of present programs and formulating plans for the future. But to carry out these key functions, the Office's staff must immediately be strengthened. The Commission urges the approval without delay of sup-

port for professionally trained, experienced people, with supporting staff, to serve in the library programs of the Office, particularly within its Division of Library Services and Educational Facilities. To provide the essential overall leadership, the National Advisory Commission on Libraries specifically recommends the appointment of an Associate United States Commissioner for Libraries, responsible directly to the Commissioner of Education.

With its library and information services programs properly organized and staffed, the Office of Education would be in a far better position to administer present and impending Federal legislation and to conduct efficiently more extensive activities on behalf of the libraries. It could then plan, extend, and coordinate, at the national level, all types of library services for schools, colleges, continuing and adult education, public libraries, research, industry, government, and other agencies. In doing so, it would assist greatly in providing the service to libraries so vital in our time.

The critically important role of the Office of Education in meeting the nation's need for services in support of libraries must be clearly recognized and fully accepted by the Federal Government.

#### *State library agencies*

Recommendation: Strengthening State library agencies to overcome deficiencies in fulfilling their current functions.

Because State library agencies are unable to fulfill their current role adequately, far less their participative role in new joint ventures toward the objectives discussed in Chapter 3, State library agencies must be strengthened. This can best be done at this time by amendment of the Library Services and Construction Act (P.L. 88-269, P.L. 89-511, P.L. 90-154) authorizing aid specifically for such agencies to enable them: (1) to overcome staff shortages, (2) to provide better consultative services to public libraries, (3) to offer special information and library services to State Government, (4) to insure that a full range of library services is offered to the handicapped and disadvantaged, (5) to initiate and encourage research into library problems, and (6) to coordinate library planning for total library service. These are the areas where serious deficiencies currently exist.

In the long-range development of State-related library services, the principle of State matching should be retained. The National Advisory Commission on Libraries believes that Federal programs should give increasing attention to the building and strengthening of regional and interstate library programs where these appear to respond more effectively and efficiently to library needs.

#### *Conclusion*

The five recommendations discussed above are the result of the deliberations of the National Advisory Commission on Libraries from its establishment by Executive Order

September 2, 1966, through June 1968. They are intended to provide structural innovations and realignments for a planned and coordinated approach to society's changing needs in the years ahead, as well as immediate actions to solve immediate problems. The order of presentation and relative length of descriptive text do not imply order of importance. All are major recommendations. Some relate to all the objectives discussed in Chapter 3; others relate more to one objective than another. All are aimed toward fulfillment of the National Policy presented in Chapter 2:

Recommendation: That it be declared National Policy, enunciated by the President and enacted into law by the Congress, that the American people should be provided with library and informational services adequate to their needs, and that the Federal Government, in collaboration with State and local governments and private agencies, should exercise leadership in assuring the provision of such services.

#### **SUMMARY OF OBJECTIVES AND RECOMMENDATIONS**

The fundamental recommendation of the National Advisory Commission on Libraries, on which further recommendations are based, is that it be declared National Policy, enunciated by the President and enacted into law by the Congress, that the American people should be provided with library and informational services adequate to their needs, and that the Federal Government, in collaboration with State and local governments and private agencies, should exercise leadership assuring the provision of such services.

#### *Objectives for overcoming current inadequacies*

Provide adequate library and informational services for formal education at all levels.

Provide adequate library and informational services for the public at large.

Provide materials to support research in all fields at all levels.

Provide adequate bibliographic access to the nation's research and informational resources.

Provide adequate physical access to required materials or their texts throughout the nation.

Provide adequate trained personnel for the varied and changing demands of librarianship.

#### *Recommendations for achieving the objectives*

1. Establishment of a National Commission on Libraries and Information Science as a continuing Federal planning agency.

2. Recognition and strengthening of the role of The Library of Congress as the National Library of the United States and establishment of a Board of Advisers.

3. Establishment of a Federal Institute of Library and Information Science as a principal center for basic and applied research in all relevant areas.



4. Recognition and full acceptance of the critically important role the United States Office of Education currently plays in meeting needs for library services.

5. Strengthening State library agencies to overcome deficiencies in fulfilling their current functions.

#### APPENDIX A

#### TEXT OF THE PRESIDENT'S STATEMENT AND THE EXECUTIVE ORDER ESTABLISHING THE PRESIDENT'S COMMITTEE ON LIBRARIES AND THE NATIONAL ADVISORY COMMISSION ON LIBRARIES

##### 1. STATEMENT BY THE PRESIDENT

Our nation is providing better education to more citizens today than ever before. The result of this expanding effort in education is a rising demand for information—and a tidal wave of new information touching every aspect of our lives: health, education, jobs, national defense, goods and services, transportation, communications and environmental use.

But merely piling up valuable new knowledge is not enough; we must apply that knowledge to bettering our lives.

In our effort to do this, we depend heavily upon the nation's libraries. For this reason, the Federal government will spend, next year, more than \$600 million in the library field.

But money alone cannot do the job. We need intelligent planning and advice to see that our millions are spent well. We need to ask serious questions about the future of our libraries:

What part can libraries play in the development of our communications and information-exchange networks?

Are our Federal efforts to assist libraries intelligently administered, or are they too fragmented among separate programs and agencies?

Are we getting the most benefit for the taxpayer's dollar spent?

To help answer these questions, I have signed today an Executive Order creating the National Advisory Commission on Libraries, composed of distinguished citizens and experts.

I have asked the Commission to appraise the role and adequacy of our libraries, now and in the future, as sources for scholarly research, as centers for the distribution of knowledge, and as links in our nation's rapidly evolving communications networks.

I have also asked the Commission to evaluate policies, programs, and practices of public agencies and private organizations—and to recommend actions which might be taken by public and private groups to ensure an effective, efficient library system for the nation.

I believe that this new Commission, aided by public and private efforts, will bring real advances in our progress toward adequate library service for every citizen.

Dr. Douglas Knight, president of Duke University in Durham, North Carolina, will serve as the Commission chairman.

The other members are:<sup>1</sup>

Proposed Membership for the National Library Commission:

Douglas M. Knight, President of Duke University, Chairman.

Verner Clapp, President, Council on Library Resources.

Herman Fussler, Library, University of Chicago.

Carl Overhage, M.I.T., Cambridge, Massachusetts.

Theodore Waller, President, Teaching Materials Corporation, New York (resigned December 28, 1966).

Wilbur Schramm, Director, Institute for Communication Research, Stanford University.

Launor Carter, Senior Vice President, System Development Corporation, Santa Monica.

Caryl Haskins, Carnegie Institution, Washington, D.C.

William N. Hubbard, Jr., Dean, University of Michigan Medical School, and Chairman, Educom.

Alvin Eurich, President, Aspen Institute for Humanistic Studies, Colorado.

Stephen Wright, former President of Fisk University, Nashville, Tennessee.

Harry Ransom, Chancellor, University of Texas, Austin.

Carl Elliott, former Congressman from Alabama.

Estelle Brodman, Medical Library, Washington University, St. Louis, Missouri.

##### 2. EXECUTIVE ORDER NO. 11301

By virtue of the authority vested in me as President of the United States, it is ordered as follows:

Section 1. *Establishment of Committee.*

(a) There is hereby established the President's Committee on Libraries (hereinafter referred to as the "Committee").

(b) The membership of the Committee shall consist of the Secretary of Health, Education, and Welfare, who shall be the Chairman of the Committee, the Secretary of Agriculture, the Director of the Office of Science and Technology, and the Director of the National Science Foundation, and may include, in addition, the Librarian of Congress who is hereby invited to be a member of the Committee. Each member of the Committee may designate an alternate, who shall serve as a member of the Committee whenever the regular member is unable to attend any meeting of the Committee.

Section 2. *Duties of the Committee.* (a) The Committee shall:

(1) Appraise the role of libraries as resources for scholarly pursuits, as centers for the dissemination of knowledge, and as com-

<sup>1</sup> See beginning of report for the final official list of Commission membership.

ponents of the Nation's rapidly evolving communications and information-exchange network;

(2) Evaluate policies, programs, and practices of public agencies and private institutions and organizations with reference to maximum effective and efficient use of the Nation's library resources; and

(3) Develop recommendations for action by Government or by private institutions and organizations designed to ensure an effective and efficient library system for the Nation.

(b) Such recommendations shall take into account the final report of the National Advisory Commission on Libraries established by Section 3 of this order, which report shall be transmitted to the President with the recommendations of the Committee.

#### Section 3. *Establishment of Commission.*

(a) To assist the Committee in carrying out its functions under Section 2 of this order, there is hereby established the National Advisory Commission on Libraries (hereinafter referred to as the "Commission").

(b) The Commission shall be composed of not more than twenty members appointed by the President, none of whom shall be officers or full-time employees of the Federal Government. The President shall designate the Chairman of the Commission from among its members.

(c) The Commission shall meet on call of the Chairman.

(d) Each member of the Commission may be compensated for each day such member is engaged upon work of the Commission, and shall be reimbursed for travel expenses, including per diem in lieu of subsistence, as authorized by law (5 U.S.C. 55a; 5 U.S.C. 73b-2) for persons in the Government service employed intermittently.

Section 4. *Duties of the Commission.* (a) The Commission shall transmit to the Committee its independent analysis, evaluation, and recommendations with respect to all matters assigned to the Committee for study and recommendations.

(b) In carrying out its duties under subsection (a), above, the Commission shall:

(1) Make a comprehensive study and appraisal of the role of libraries as resources for scholarly pursuits, as centers for the dissemination of knowledge, and as components of the evolving national information systems;

(2) Appraise the policies, programs, and practices of public agencies and private institutions and organizations, together with other factors, which have a bearing on the role and effective utilization of libraries;

(3) Appraise library funding, including Federal support of libraries, to determine how funds available for the construction and support of libraries and library services can be more effectively and efficiently utilized; and

(4) Develop recommendations for action by Government or private institutions and organizations designed to ensure an effective and efficient library system for the Nation.

(c) The Commission shall submit its final report and recommendations to the Committee no later than one year after the date of its first meeting, and shall make such interim reports as it deems appropriate for improving the utilization of library resources.

Section 5. *Federal departments and agencies.* (a) The Committee or the Commission is authorized to request from any Federal department or agency any information deemed necessary to carry out its functions under this order; and each department or agency is authorized, consistent with law and within the limits of available funds, to furnish such information to the Committee or the Commission.

(b) Each department or other executive agency the head of which is named in Section 1(b) of this order shall, as may be necessary, furnish assistance to the Committee or the Commission in accordance with the provisions of Section 214 of the Act of May 3, 1945 (59 Stat. 134; 31 U.S.C. 691), or as otherwise permitted by law.

(c) The Department of Health, Education, and Welfare is hereby designated as the agency which shall provide administrative services for the Commission.

Section 6. *Termination of the Committee and the Commission.* The Committee and the Commission shall terminate ninety days after the final report of the Commission is submitted to the Committee.

LYNDON B. JOHNSON.

THE WHITE HOUSE, September 2, 1966.

#### APPENDIX B

##### SELECT LIST OF SPECIAL STUDIES

One of the most ambitious endeavors undertaken by the National Advisory Commission on Libraries was to call for more than a dozen special studies on a wide range of subjects. Social science, history, political science, economics, information science, education, and library science were only some of the disciplines contributing to the studies—all of which were performed within the limited space of a few months.

Most of these special studies, commissioned by or made available to the Commission, contributed at least partially to Commission decision-making, although there was by no means a total endorsement of every position or recommended action in even the most highly acclaimed studies. All will be made available to the United States Office of Education for consideration for the Educational Research Information Center (ERIC), and several will appear elsewhere—notably in a forthcoming book based on Commission activity.

The list on the following page includes those special studies the Commission judged to be relevant to the problems with which it was concerned and worthy of serious consideration, although a few are of mostly descriptive value. Studies, or parts of studies, that were not completed in time for careful study by the membership are not included on the

list, nor are those deemed to be of little or no immediate relevance to Commission decision-making in the form in which they were submitted.

#### TITLE OF STUDY AND AGENCY CONDUCTING STUDY

1. Technology and Libraries, System Development Corporation.
2. On Research Libraries,<sup>2</sup> American Council of Learned Societies.
3. The Impact of Technology, on the Library Building,<sup>2</sup> Educational Facilities Laboratories.
4. The Federal Government and Libraries, Duke University.
5. American State Libraries and State Library Agencies, Nelson Associates, Inc.
6. Impact of Social Change on Libraries, National Book Committee.
7. On the Economics of Library Operation, Mathematica.
8. The Use of Libraries and the Conditions That Promote Their Use, The Academy for Educational Development, Inc.
9. Special Libraries: Problems and Cooperative Potentials, American Documentation Institute.
10. School Libraries in the United States, Nelson Associates, Inc.
11. Undergraduate and Junior College Libraries in the United States, Nelson Associates, Inc.
12. Public Libraries in the United States, Nelson Associates, Inc.
13. Libraries and Industry, Programming Services, Inc.

#### APPENDIX C

##### LIST OF REGIONAL HEARINGS

Another project of the National Advisory Commission on Libraries was designed to acquire information on the people's needs for library and informational services. This was the series of regional hearings, held during the summer and early fall of 1967, at which subcommittees of Commission membership heard testimony from variety of citizens, businessmen, professional people, farmers, white-collar and blue-collar workers, students, teachers, parents, and local, state, and national officials in communities of varying size throughout the nation. There was testimony representing the blind, the aged, and virtually all religious and ethnic groups in America.

The results contributed particularly to the Commission's consensus on the objective to "provide adequate library and informational services for the public at large" and on the recommendation for strengthening State library agencies. The need to solve library problems by effective manpower utilization was pervasive throughout all the hearings. The forthcoming book based on Commission materials will include highlights from the re-

<sup>2</sup>Not financed or only partially financed by the Commission but offered to ERIC.

gional hearings and a complete list of all who testified. A summary table appears below:

#### REGIONAL HEARINGS

Locale	Date, 1967	Number of witnesses
St. Louis, Mo. 1	Apr. 12	7
Tampa, Fla.	Sept. 8	25
Great Falls, Mont.	Sept. 11	30
Portland, Oreg.	Sept. 13	34
Anchorage, Alaska	Sept. 15	22
Nome, Alaska 2	Sept. 16	—
Bismarck, N. Dak.	Sept. 18	42
Wilkes-Barre, Pa.	Sept. 22	23
Baton Rouge, La.	Oct. 4	48
Lubbock, Tex.	Oct. 6	47
Pikeville, Ky.	Oct. 20	64
Tucson, Ariz.	Oct. 27	24

<sup>1</sup> This earlier meeting was actually held before the series of regional hearings was established

<sup>2</sup> No transcript has been received in the Commission office, hence there is no record of the number of witnesses giving testimony.

#### APPENDIX D

##### LIST OF COMMISSION MEETINGS AND WITNESSES AND GUESTS AT EACH

The Members of the National Advisory Commission on Libraries convened formally on eleven occasions to hear testimony, to converse with both witnesses and guests, and to deliberate among themselves on a broad range of topics relevant to the study of library and informational services for the nation's needs. A list of these meetings of the full Commission appears below. The titles of the witnesses who gave formal testimony and of the guests who visited are shown as they were at the time of each meeting.

##### I. NOVEMBER 30, 1966, WASHINGTON, D.C.

Guests: S. Douglass Cater, Jr., Special Assistant to the President; Harold Howe II, Commissioner of Education; Louis Hausman, Assistant to the Commissioner of Education; Jerome N. Bluestein, Administrative Officer, Office of the Commissioner of Education.

##### II. JANUARY 7 AND 8, 1967, NEW ORLEANS, LA.

Witnesses: An informal meeting was held on January 8 with representatives of the Association of Research Libraries Liaison Committee and the Committee on National Library-Information Systems. There is no transcript of this meeting.

##### III. FEBRUARY 13, 1967, WASHINGTON, D.C.

##### Witnesses

Burton W. Adkinson, Head, Office of Science Information Service, National Science Foundation.

Scott Adams, Deputy Director, National Library of Medicine.

Andrew A. Aines, Technical Assistant, Office of Science and Technology, and Acting Chairman of the Committee on Scientific and Technical Information (COSATI) of the Federal Council for Science and Technology (FCST).

Foster E. Mohrhardt, Director, National Agricultural Library.

IV. MARCH 5 AND 6, 1967 NEW YORK, N.Y.

*Witnesses*

Kathleen Molz, Editor, *Wilson Library Bulletin*.

Jean Connor, Director, Division of Library Development, New York State Library.

Edward G. Freehafer, Director, New York Public Library.

Frank L. Schick, Director, School of Library and Information Science, University of Wisconsin (Milwaukee).

Bill M. Woods, Executive Director, Special Libraries Association.

Frank E. McKenna, President, Special Libraries Association.

Lester E. Asheim, Director, Office for Library Education, American Library Association.

John M. Cory, Executive Director, New York Metropolitan Reference and Research Library Agency.

John A. Humphry, Director, Brooklyn Public Library.

Paul Wasserman, Dean, School of Library and Information Services, University of Maryland.

Eric Moon, Editor, *Library Journal*, R. R. Bowker Publishing Company.

V. APRIL 18 AND 19, 1967, CHICAGO, ILL.

*Witnesses*

American Library Association Representatives: Mary V. Gaver, President; David H. Clift, Executive Director.

American Library Association Panel Members: Ralph U. Blasingame, Associate Professor, Graduate School of Library Science, Rutgers University; Keith Doms, Director, Carnegie Library of Pittsburgh; Frances B. Jenkins, Professor, Graduate School of Library Science, University of Illinois; Marion A. Milczewski, Director, University of Washington Libraries; Frederick H. Wagman, Director, University of Michigan Library; Eileen Thornton, Librarian, Oberlin College; Harold G. Johnston, Director, Detroit Metropolitan Library Project; Genevieve M. Casey, State Librarian, Michigan State Library; Gertrude E. Gscheidle, Chief Librarian, Chicago Public Library; Jesse H. Shera, Dean, School of Library Science, Western Reserve University; Don R. Swanson, Dean, Graduate Library School, University of Chicago; Ralph H. Parker, Dean, Library School, University of Missouri; James L. Lundy, President, University Microfilms; James G. Miller, Principal Scientist, Educom.

VI. MAY 22 AND 23, 1967, WASHINGTON, D.C.

*Witnesses*

Present from the Library of Congress: L. Quincy Mumford, Librarian of Congress; John G. Lorenz, Deputy Librarian of Congress; Elizabeth E. Hamer, Assistant Librarian; Marlene D. Morrissey, Executive Assistant to the Librarian of Congress; Paul L. Berry,

Director, Administrative Department; Lewis C. Coffin, Law Librarian; Roy P. Basler, Director, Reference Department; William J. Welsh, Acting Director, Processing Department; Marvin W. McFarland, Chief, Science and Technology Division; Abraham L. Kaminstein, Register of Copyrights; Lester S. Jayson, Director, Legislative Reference Service; Paul R. Reimers, Coordinator of Information Systems.

Alice Ball, Executive Director, United States Book Exchange.

Germaine Krettek, Associate Executive Director, American Library Association, and Director, ALA Washington Office.

Edwin Castagna, Chairman, Legislation Committee, American Library Association.

Paul Howard, Executive Secretary, Federal Library Committee.

Henry J. Gartland, Director of Libraries, Veterans Administration.

Burton E. Lamkin, Chief, Library and Information Retrieval Branch, Federal Aviation Administration.

Hubert E. Sauter, Deputy Director, Clearinghouse of Federal Scientific and Technical Information.

Melvin S. Day, Deputy Assistant Administrator, Office of Technical Utilization, National Aeronautics and Space Administration.

Edward J. Bruenenkant, Director, Division of Technical Information, U.S. Atomic Energy Commission.

Walter C. Christensen, Staff Assistant for Scientific Information, Department of Defense.

Representatives from the Office of Education: Harold Howe II, Commissioner of Education; Grant Venn, Associate Commissioner, Bureau of Adult and Vocational Education; Lee Burchinal, Director, Division of Research Training and Dissemination; Ray Fry, Director, Division of Library Services and Educational Facilities; Eugene Kennedy, Chief, Library and Information Science Research Branch; Alexander Mood, Assistant Commissioner, National Center for Educational Statistics; Morris Ullman, Chief, Adult, Vocational, and Library Studies Branch.

VII. JUNE 25 AND 26, 1967, SAN FRANCISCO, CALIF.

Guests: Maryann Reynolds, Librarian, Washington State Library; Lucile Nix, Library Consultant, Georgia State Department of Education, Public Library Unit (Library Extension Service); Carma Leigh, Librarian, California State Library.

VIII. SEPTEMBER 6 AND 7, 1967, WASHINGTON, D.C.

Guests: Carolyn I. Whitenack, Associate Professor, Library and Audiovisual Education, Purdue University; Mary Helen Mahar, Chief of School Library Section and Acting Chief, Instruction Research Branch, U.S. Office of Education; William Knox, Vice-President, McGraw-Hill, Inc.; J. Lee West-

rate, Senior Management Analyst, Bureau of the Budget; Louis B. Wright, Director, Folger Shakespeare Library.

IX. OCTOBER 9, 10, AND 11, 1967, WASHINGTON, D.C.

Guest: Barnaby C. Keeney, Chairman, National Endowment for the Humanities.

ADDITIONAL HEARING

November 27 and 28, 1967 (Washington, D.C.).

May 1, 1968 (New York, New York).

---

REPORT OF THE NATIONAL ADVISORY COMMISSION ON LIBRARIES

REMARKS

OF

HON. WAYNE MORSE

OF OREGON

IN THE SENATE OF THE UNITED STATES

*Monday, October 14, 1968*

Mr. MORSE. Mr. President, on October 3, the President's Committee on Libraries submitted to the President the report of the National Advisory Commission on Libraries. In his letter of transmittal, HEW Secretary Wilbur Cohen who served as chairman stated that:

The Committee found it a highly stimulating report, containing numerous ideas which would strengthen the role of libraries in our society . . . Libraries are the keepers of our history and our culture. But they are not merely storehouses for the relics of the past, but meeting places for people and ideas, vital partners in our system of education.

The Committee urges a wide distribution of the Report. Its recommendations should be considered and discussed by individuals and groups at Federal, State and local levels, both in and out of the library community. It should encourage all of these groups as they make plans for even more effective services.

As part of the Commission's investigation, regional hearings were held in a dozen communities throughout the country to ascertain the people's library needs at the grassroots of our Nation. One of these important hearings took place in Portland, Oreg., where a representative group of some 34 people from Oregon and neighboring States testified on the significance of libraries in their communities, and needs for the future.

For 8 years I have been chairman of the Educational Subcommittee and next year I will be chairman of the highly im-

portant full Committee on Labor and Public Welfare, which considers bills on education, including libraries. I may say that I think we have made great progress to date in assisting the people of Oregon and the people of the whole Nation to receive improved library service, but much more needs to be done if all of our people are to have available to them the kind of library service which is so essential to our country's well-being and progress.

One of the most steadfast supporters of this effort has been my friend and colleague LISTER HILL, of Alabama, who is retiring this year after 45 years in Congress, 30 of them in the Senate. In recognition of his longstanding support of libraries, Senator HILL was recently honored at a luncheon by more than 100 librarians from 46 States, meeting in Washington. On this occasion he was presented with a hand-lettered citation, adopted earlier this year by the American Library Association at their annual conference:

RESOLUTION ADOPTED BY THE ALA COUNCIL

(The governing body of the American Library Association, at the Association's 87th annual conference in Kansas City, Mo., June 28, 1968)

Whereas, Senator Lister Hill of Alabama has served with distinction in the United States House of Representatives for fifteen years, in the United States Senate for thirty years, and as Chairman of the Committee on Labor and Public Welfare of the United States Senate for thirteen years, and

Whereas, Senator Hill first sponsored legislation in support of Federal assistance for public library service in rural areas on May 12, 1946, in the Second Session of the 79th Congress, and patiently sustained his advocacy of this great cause until the Library Services Act was enacted in the Second Session of the 84th Congress and signed by the President on June 19, 1956, and

Whereas, Senator Hill was instrumental in the expansion of the Library Services Act by the United States Congress in November 1963 to permit extension of public library services, with Federal support, to every part of every State in the Union, and

Whereas, in the course of his long and distinguished career in the United States Congress, Senator Hill has continuously and creatively sought to strengthen and advance the schools, colleges, universities and research institutions of the Nation and to this end has guided to enactment by the United States Congress such legislative landmarks as the School Assistance in Federally Affected Areas

Act of 1950, the National Defense Education Act of 1958, the Higher Education Facilities Act of 1963, the Higher Education Act of 1965, and the monumental Elementary and Secondary Education Act of 1965, and

Whereas, Senator Hill's inspired leadership also secured enactment by the United States Congress of numerous other statutes in furtherance of the cause of education and library services, including the Veterans Readjustment Acts of World War II and subsequent conflicts, the National Science Foundation Act of 1950, the National Library of Medicine Act of 1956, the War Orphans Educational Assistance Act of 1956, the Captioned Films for the Deaf Act of 1958, the Economic Opportunity Act of 1964, the Older Americans Act of 1965, the Act of 1965 for the National Foundation on the Arts and Humanities, and the Sea Grant College Act of 1966, and

Whereas, Senator Hill was among the handful of United States Senators who courageously and presciently evoked the support of the American people for the organization of the United Nations and his unfaltering devotion to the cause of cooperation among all

countries has been manifest in his espousal of the historic International Education Act of 1966, and

Whereas, Senator Hill has been since 1956 an Honorary Life Member of the American Library Association,

Now, therefore, do we, The Council of the American Library Association, hereby approve for transmittal this Certificate of Commendation to Senator Lister Hill of Alabama in tribute to his distinguished career in public office, his unmatched contributions in behalf of all libraries and his steadfast, compassionate and understanding dedication to the enlightenment and advancement of the people of the United States of America.

Transmitted by David H. Clift, executive director, American Library Association.

It seems fitting to take this opportunity to commend Senator Hill for his efforts in behalf of libraries and education, as the National Advisory Commission on Libraries issues a report which highlights the successes of the past and points out the continuing work needed to meet the future.

### To SLA Members and Subscribers

Our renewal notices for 1969 have been delayed as a result of our file clean-up and file conversion to unit record equipment—and the schedule has slipped. We thought that you would like to see our systems man at work as well as our new expeditor.



# WORLD MEETINGS

## must form a part of the ready reference collection of every good scientific and technical library

The World Meetings publications—World Meetings . . . United States and Canada and World Meetings . . . Outside U.S.A. and Canada—are the definitive references to meetings and their literature. They supply information in depth on future meetings of interest to the scientific, medical, and engineering communities throughout the world. These journals are completely revised and cumulated each quarter and represent the most complete and accurate archive of information on meetings available.

Detailed listings give information on the technical content, publications, exhibits, deadlines for papers, name, date, and location of each meeting in addition to the names and addresses of the persons to contact for further information in these areas.

Five pre-coordinated, computer-produced indexes give quick access to the data in the listings. A system of invariant registry numbers greatly simplifies the problem of following any meeting from issue to issue and provides the librarian with a method of using World Meetings as an aid to the cataloging and retrieval of meetings literature.

Information included in the World Meetings publications is obtained entirely by direct inquiry to the organizers of the meetings rather than from secondary sources. All listings are verified and updated at three-month intervals.

The World Meetings publications are compiled, edited, and indexed by a full-time professional staff and are reviewed regularly by our editorial advisory boards of distinguished engineers, scientists, physicians, and information experts. These reviews ensure the user that the publications keep abreast of the rapidly changing worlds of science, engineering, and medicine.

With the scientific and technical community spending more than \$1 billion each year on meetings, can you afford to have this reference more than an arm's length away?

Send the coupon now.

**WORLD MEETINGS** *A Service of TMIS*

World Meetings. . . United States and Canada . . . . . Quarterly (Jan., Apr., Jul., Oct.)	\$25* annual subscription *\$35 as of January 1969
World Meetings. . . Outside U.S.A. and Canada . . . . . Quarterly (Jan., Apr., Jul., Oct.)	\$35 annual subscription

**TMIS, 79 Drumlin Road, Newton Centre, Mass. 02159, U.S.A.**

**Start my subscription to:**

☐ World Meetings. . . United States and Canada

☐ World Meetings. . . Outside U.S.A. and Canada

☐ \$\_\_\_\_\_ is enclosed (U.S. funds)

☐ Please bill me

NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

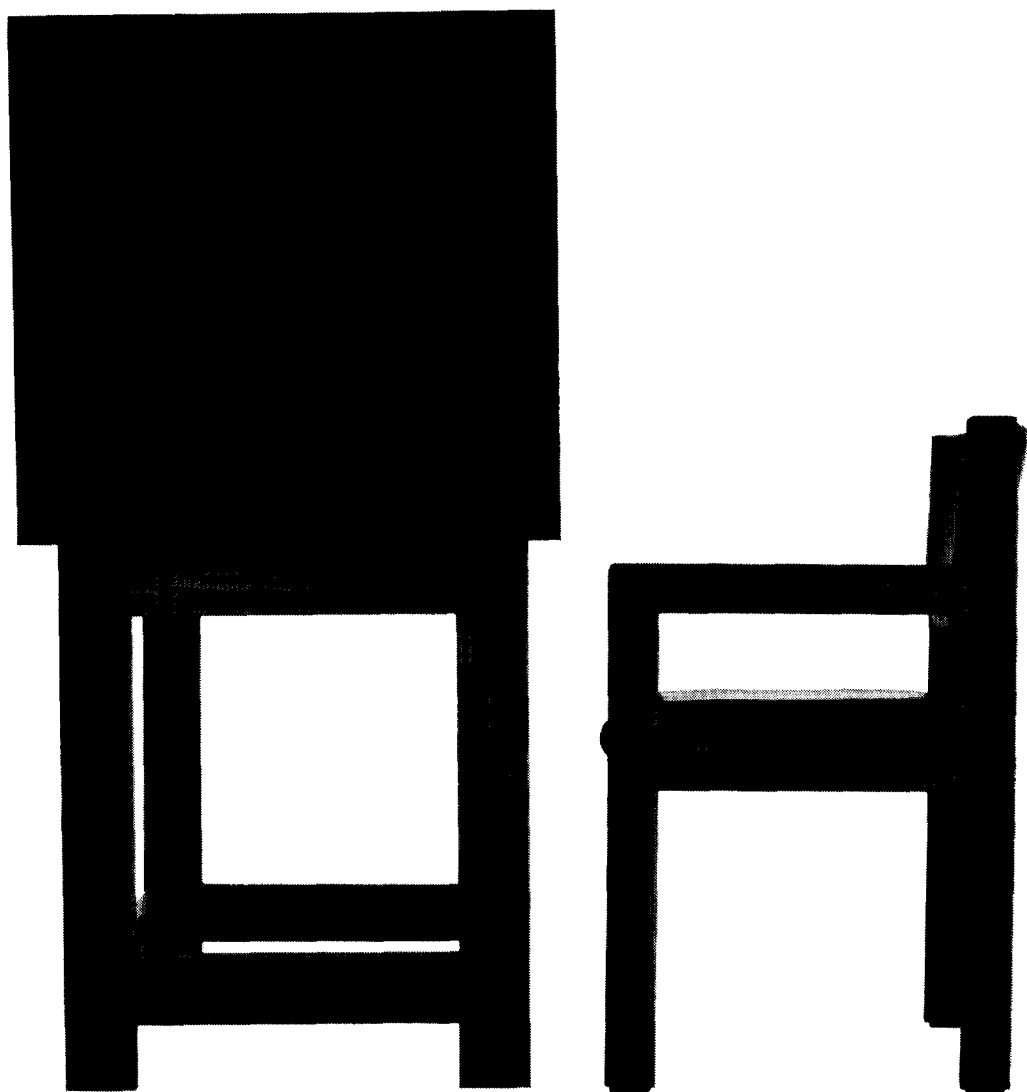
CITY \_\_\_\_\_

STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**Please send a sample of:**

☐ World Meetings. . . United States and Canada

☐ World Meetings. . . Outside U.S.A. and Canada



**Tektonic 100: designed to offer a simple, sensible and inviting working environment.** This distinctive group of oak design furniture from Library Bureau, Remington Rand Office Systems Division, is characterized by its severe simplicity of design. So it compliments any contemporary setting without sacrificing the student's needs and study habits.

Any number of color-coordinated materials can be used to provide the architect, interior designer or librarian with an infinite variety of individualized schemes. For instance, chair upholstery, insert panels for the carrels, wood tones and optional accent colors can be matched to the draperies or carpeting. Whatever the scheme, this furniture can create the proper study environment.

For more information on the Tektonic 100 group: carrels, tables, card catalogs, and technical equipment, contact Library Bureau.

**LIBRARY BUREAU**

REMINGTON RAND OFFICE SYSTEMS DIVISION  
801 PARK AVE. HERKIMER, N.Y. 13350-3115 866 1330





If we don't have the  
out-of-print book  
you're looking for,  
we'll find it,  
film it,  
clear copyright,  
pay royalties  
and send it to you  
for 4¢ a page.

Even if we end up in the Alps. Like we did last year to microfilm 11th and 12th century manuscripts in monastic scriptoria.

But suppose you need "The Twenty-two Musical Srutis of the Hindus." Or "The Doty-Doten Family in America." Or "Glavnyia Techeniia Russkoi Istoricheskoi Mysli." Nice sounding names. Nice until you try to find them.

Usually, we just have to go downstairs to our vaults where we keep over 50,000 titles. But whether we go to Timbuktu or whether the

original is worth \$10 or \$10,000, the cost for your copy is the same. A penny-and-a-third a page for 35mm positive microfilm. Four cents a page for a paperbound xerographic copy. Six cents a page for a copy in a foreign language.

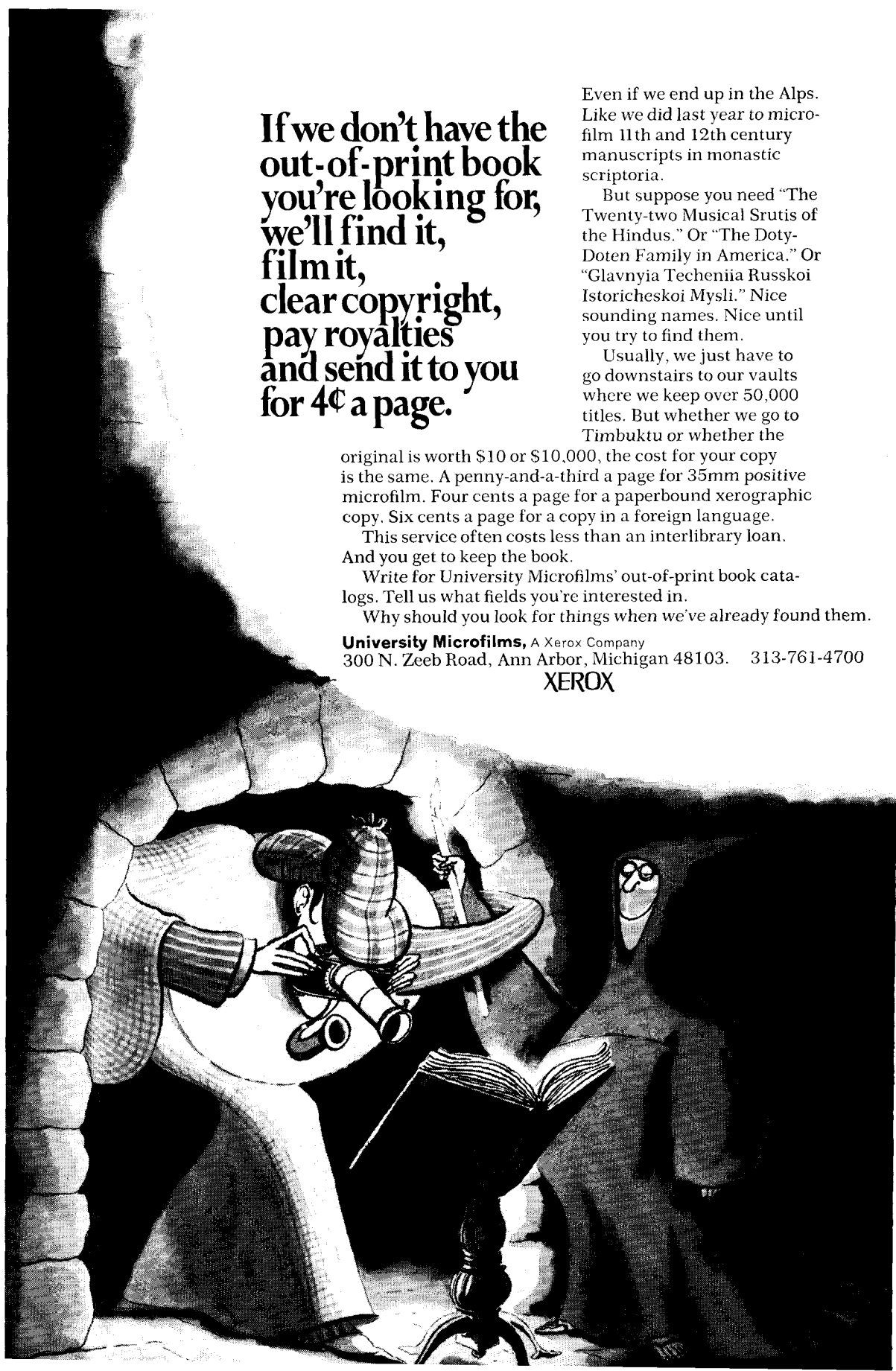
This service often costs less than an interlibrary loan. And you get to keep the book.

Write for University Microfilms' out-of-print book catalogs. Tell us what fields you're interested in.

Why should you look for things when we've already found them.

**University Microfilms**, A Xerox Company  
300 N. Zeeb Road, Ann Arbor, Michigan 48103. 313-761-4700

**XEROX**



# BRITISH TECHNOLOGY INDEX

Save time  
Keep abreast

Current subject guide to 390 British technical journals

Specific indexing

Minimal time lag

Monthly Parts and bound Annual Volume

## THE LIBRARY ASSOCIATION

7 Ridgmount St.

Store St.

London, W.C. 1., England

# Once upon a Time

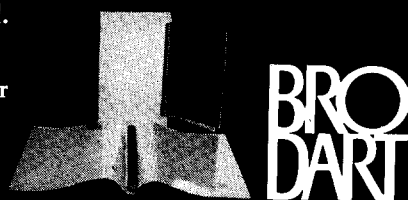
No, not once.

Bro-Dart magazine binders can be used Time and Time again.

There is a complete selection to satisfy every requirement. Rugged Plasti-Kleer® with or without hard back. Buckram covered binder board. And a wide choice of locking devices.

Each is engineered for lasting protection for your periodicals.

They come in every size.  
Even bigger than Life.



56 Earl Street, Newark, New Jersey 07114

For more information write Dept. SL-12.

SOCIETY OF PHOTO-OPTICAL INSTRUMENTATION ENGINEERS

## SEMINAR PROCEEDINGS VOLUME—12

# UNDERWATER PHOTO-OPTICAL INSTRUMENTATION APPLICATIONS

The SPIE Underwater Photo-optical Instrumentation Applications Proceedings is a publication resulting from a two-day Seminar devoted to the subject. The book contains sections of technical papers related to Underwater Systems, Optical Oceanographic Equipment, Light Sources, Optics and Sensors.

A highlight presentation is that by Captain Jacques Cousteau entitled "Seeing in the Sea," which is essentially a report and a challenge to the industry. The keynote address by Dr. E. C. LaFond of the Marine Environments Division, Naval Undersea Warfare Center, is "Photographic Problems in Oceanography."

Specific papers discuss: Laser Viewing; Range-Gated Measurements; Photo-optical Systems of Marine Animals; Color Saturation Recording; Sea Lab III Photography; Stereo Photographic Mapping; Underwater Video; Observation of Deep Sea Life; Contrast of Submerged Objects; Optical Transmissometer; Measurement of Visibility Limiting Seawater; Illuminometer Systems; High Intensity, Underwater Searchlight; Increased Color Perception; Incandescent, Mercury Vapor, and Thallium Iodide Lighting; and Electro-optical Underwater Search and Visibility Enhancement Techniques.

Copies are available by ordering from S.P.I.E., Proceedings No. 12, 216 Avenida del Norte, Redondo Beach, Calif. 90277. Price \$20.00 per copy.

## SYMPOSIUM PROCEEDINGS AVAILABLE

### 9th National Symposium on Information Display

Los Angeles, California May 1968

Contents include: Iso-Echo Contour Circuit for Selective Threshold Display of Precipitous Video Targets on a Weather Radar RHI/PPI Screen, Photoplastic Film Multi-Color Display, A High Resolution Closed Circuit Remote Viewing System, Generalized Equations for Display System Design. \$15.00

#### ALSO AVAILABLE

### 8th National Symposium on Information Display

San Francisco, California May 1967

Contents include: Dry Silver Recording Materials for Display Purposes, The Application of Photochronics to Color Display, The Plasma Display Panel—A New Device for Information Display and Storage, Anaglyph Stereoscopic CRT Display System, Analysis of Saturation and Reliability in a Shared Display System. \$15.00

### 7th National Symposium on Information Display

Boston, Massachusetts October 1966

Contents include: Display Devices and Techniques, Information Processing as a Function of Display Format, The Observer—Human Factors and Performance, Display Systems, Display Standards and Measurements. \$15.00

Commencing January 1969, the Society for Information Display Proceedings will be published as a quarterly journal of approximately 450 pages. This journal will include the annual Symposium proceedings as well as other papers reflecting the current status of this discipline.

Annual Subscription:  
(payable in advance)

\$30.00 domestic  
\$35.00 foreign

Send for Free Catalog

## WESTERN PERIODICALS CO.

13000 Raymer St. • North Hollywood • California 91605 • (213) 875-0555

Now playing at leading  
special libraries worldwide

***The Literature Problem***  
***in***  
**"PUTTING SCIENTIFIC INFORMATION**  
**TO WORK"**

*a 36-minute film featuring a stellar cast:*

**ASCA® SCI® PSI™ OATS® IC®**  
**CCCS ISI MAGNETIC TAPES**  
**CCLS CCPS ISI SEARCH SERVICE**

The Institute for Scientific Information, the pioneering information people, wanted more specialized librarians to be aware of their services. A film seemed the most practical answer to accomplish this objective. By combining the talents of some ISI services with the exciting world of color, an interesting, informative, swiftly-paced film resulted. If your organization would like to screen this 36-minute, 16 mm sound and color film, attach the coupon below (or a copy of it) to your letterhead. No charge, of course, we'd like everyone to see the film.

**isi®**

Name \_\_\_\_\_ Title \_\_\_\_\_  
Organization \_\_\_\_\_  
Library \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Country \_\_\_\_\_

IN UNITED STATES: send coupon to Dept. 26-119, Institute for Scientific Information, 325 Chestnut Street, Phila., Pa. 19106. IN EUROPE: contact Mr. Anthony Cawkell, 88 High Street, Uxbridge, Middlesex, England. Telephone Uxbridge 30085 or Mr. Peter Aborn, 6 Square Moncey, Paris 9, France. Telephone TRI 6738. IN JAPAN: contact Mr. Takashi Yamakawa, Tsutsumi Building, 13-12 1-chome, Shimbashi Minato-Ku, Tokyo. Telephone (591) 5181-6.

**Unique Collection Of  
DOCUMENTATION, MANUSCRIPTS  
ON LATIN AMERICAN ISSUES**

Available Through CIDOC

**PUBLICATIONS INCLUDE:**

**\*DOSSIER:** records and examines selected controversies involving the use of secular symbols.

**\*SONDEOS:** studies religious phenomena in the process of socio-cultural change. eg . . .

**\*CUADERNOS:** contains reprints from the Latin American press, specialized studies, indexes of materials in CIDOC archives.

**Hard To Get Data,  
Not Available Elsewhere**

Send For Our Free Quarterly Catalog

**CENTER FOR INTERCULTURAL DOC.**

Dept. D

APDO 479 CUERNAVACA, MEXICO

**Expert Service on  
MAGAZINE SUBSCRIPTIONS  
for  
SPECIAL LIBRARIES**

**Faxon Librarians' Guide**

*Available on Request*

**Fast, efficient, centralized service  
for over 80 years. Library busi-  
ness is our only business!**

**F. W. FAXON CO., INC.**

515-525 Hyde Park Avenue Boston, Mass. 02131

*Continuous Service To Libraries Since 1886*

*New*  
**Library  
Machine**

**PRINTS  
CATALOG CARDS**



**EASY  
TO USE  
FAST**

**AT  
LOW  
COST**

Hundreds of Libraries—big and small—now print 3 x 5 professional catalog cards and postcards (any quantities) with new precision geared stencil printer especially designed for Library requirements. Buy direct on Five Year Guarantee. **FREE**—Write **TO-DAY** for description, pictures, and low direct price.

**CARDMASTER, 1920 Sunnyside, Dept. 412, Chicago 40**

**SLA**

**Montreal**

**June 1-5, 1969**

**13th EDITION/1969-70  
DIRECTORY OF  
MEDICAL  
SPECIALISTS**

Now available. The complete, approved listing of the 92,000 diplomates of all medical specialty boards, contained in the directory's 2360 pages.

Listed price, \$30.00.

See your dealer, sales representative  
or order today from:

**Marquis-Who's Who, Inc.**

200 E. Ohio Street  
Chicago, Illinois 60611

Discount prices for listees,  
public institutions.



# SCIENTIFIC LIBRARY SERVICES

considers

- existing specialist library services for scientists and technologists
- training of technologists in the literature of their subject
- education and recruitment of technical librarians
- problems of the publication of scientific education
- acquisition of technical information
- storage and retrieval
- sponsorship of bibliographical research

16s.

(\$2.00)

## THE LIBRARY ASSOCIATION

7 Ridgmount Street  
London, W.C.1.  
United Kingdom

## CLASSIFIED ADVERTISING

All Classified Line Ads are \$1.50 per line; \$4.50 minimum. Current members of SLA may place a "Positions Wanted" ad at a special rate of \$1.00 per line; \$3.00 minimum. Copy for display ads must be received by the **tenth** of the month preceding the month of publication; copy for line ads must be received by the **fifteenth**.

### POSITIONS OPEN

**REFERENCE LIBRARIAN**—Technical. Master's Degree in Library Science, BA in Math, Physics or Chemistry preferred. Comprehensive reference and bibliographic work. Prefer candidates with experience, but will consider recent graduates. Located near Universities of Wake Forest, Duke and North Carolina. Starting salary \$8,000—\$10,000. Write to Mr. C. O. Mahaffey, Western Electric Company, Incorporated, 3300 Lexington Road, Winston-Salem, North Carolina 27102.

**ASSISTANT LIBRARIAN**—We have an immediate opening in our metropolitan newspaper library for an assistant who is capable of ultimately assuming the head librarian post. Prefer college graduate with major in library science or equivalent experience. Qualified applicants will hopefully have at least two years experience in a special library. Starting salary \$8,500, plus excellent fringes. Write detailing personal and work history to Personnel Director, St. Paul Dispatch and Pioneer Press, 63 East Fourth Street, St. Paul, Minnesota 55101.

**CHIEF OF ACQUISITION DIVISION**—university library in New York City, with a budget of over \$200,000. Position carries the rank of assistant professor with a starting salary of \$11,000. There are seven incremental steps to a maximum salary of \$17,000. Minimum requirements: MLS from a graduate library school, a second master's degree, knowledge of one or more foreign languages, and at least three years experience in a responsible capacity in the acquisition division of a college or university library. Work week, 35 hours, vacation, 6 weeks, and many generous fringe benefits. Apply to Librarian, Graduate Center Library, The City University of New York, 33 West 42nd Street, New York City 10036.

**COORDINATOR OF SCIENCE LIBRARIES—LIBRARIAN**—needed to coordinate departmental libraries in the sciences: Physics, Biology, Chemistry, Geology, and Virginia Associated Research Center Libraries. Three years of successful library experience is required. Major in sciences helpful. Salary: \$9,600—\$12,000. Contact Mr. James H. Renz, Associate Librarian, The College of William and Mary in Virginia, Earl Gregg Swem Library, Williamsburg, Virginia 23185.

**LIBRARIAN**—Two modern public library positions open. Serving Gulf Coast area of 200,000 population. Finest beaches, boating, fishing, etc. Degree in library science, or related degree with 12 hours LS. Salary to \$7,306. Send resume to Thomas S. Siler, Director of Personnel, P.O. Box 1471, Pensacola, Florida 32502.

# DIRECTOR

WITH FULL ADMINISTRATIVE POWERS  
TO DEVELOP  
MICROPUBLISHING DIVISION  
FOR LARGE MIDWEST  
MICROFORM ORGANIZATION

*Initiate, institute and  
direct new research  
programs in  
micropublishing*

HERE'S A CHALLENGE FOR A DYNAMIC  
PERSON WITH A SCHOLARLY APPROACH  
...HIGHLY ORIENTED TO THE NEEDS  
OF LIBRARIES AND RESEARCHERS.

Salary Open—  
Send Resume

Special Libraries  
Box C-93

"SABBATICAL" LIBRARIAN—(Up to 12 months) to build an information center for the product development group of a large wood products corporation of 12,000 employees and annual sales of \$250 million. Duties will include planning the initial program and selection of permanent staff. We prefer an individual with the experience required for establishing such a program, and who is familiar with the latest techniques and available equipment. He should have a formal education in library/information science, and a knowledge of the needs of a business oriented technical group. Generous fringe benefit program. Salary open. Mild climate—excellent outdoor recreations—community of 35,000. Send resume in confidence to Mr. J. H. Markley, Wood Products Research, Potlatch Forests, Inc., Lewiston, Idaho 83501.

SUNY, BUFFALO—Science & Engineering Library has an immediate opening for an experienced documents librarian to head its Serials/Reports Section. Primary responsibilities with building technical reports collection, handling all depository items and coordinating serial/bindery operations. Assists in planning for automation of serials and documents. Starting salary \$10,000–11,500 depending on qualifications. Faculty rank appointment, one month vacation, state-paid TIAA-CREF health insurance. Qualifications: MLS degree and 5–7 years of experience, including substantial work with technical reports. Knowledge of serial cataloging helpful. Language facility desired. Send resume in confidence to Mark Silvestri, Assistant to Director for Personnel, Room 307, Lockwood Memorial Library, State University of New York, Buffalo, N. Y. 14214.

TECHNICAL INFORMATION SPECIALIST—the Technical Information Center of Puerto Rico has a staff position open for an Information Specialist with a comprehensive knowledge of abstracting, indexing and literature searching. Should be familiar with mechanized storage and retrieval of information. This is a challenging opportunity to start from "scratch". MSLS desirable, but a BS with experience will be considered. Salary open. Puerto Rico is known as the "Island of Enchantment." Swimming year round. Mean temperature 76°. Other fringe benefits: paid vacation, sickness leave, savings and retirement plans, paid holidays, free tuition for continuing education at the University of Puerto Rico. Sounds Good! Contact: Mr. Félix Luis Ortiz-Cintrón, Director, Technical Information Center of Puerto Rico, University of Puerto Rico, Mayaguez, Puerto Rico 00708.

LIBRARIAN (Literature Scientist)—The Chemagro Corp. in Kansas City, Mo., has an excellent position available in their technical library. LS degree with a BS in chemistry desired. Will seriously consider individual with a background in chemistry and experience in computer application and systems organization, including information retrieval methods and equipment. Write or send resume to: T. E. Mason, Chemagro Corp., P. O. Box 4913, Kansas City, Mo. 64120.

LOS ALAMOS SCIENTIFIC LABORATORY—of the University of California has opening for a Serials Librarian. In addition to usual serials work, there are interesting related responsibilities for translations, Library Exchange Program and publications of the laboratory's research staff. Participates in cooperative subject cataloging of books and reports, and assists with some reference activities. Heads section with 3 other employees. Total library staff is 34. Library degree necessary; science background would be helpful. Administrative ability required; computer experience would be utilized. Professional staff encouraged to be active in SLA and State Library Association. The Laboratory is located in the Ponderosa Pine forests of Northern New Mexico. The climate is cool in summer and mild in winter with excellent recreational opportunities in nearby areas. Competitive salary and liberal fringe benefits. United States Citizenship Required. Please send complete resume to: Recruiting Department, Los Alamos Scientific Laboratory, University of California, P.O. Box 1663, Los Alamos, New Mexico 87544.

An Equal Opportunity Employer.

SERIALS LIBRARIAN—Experienced. To advance to top managerial position with leading antiquarian periodical house. Should know periodical values. Will train right person if necessary. Excellent opportunity and benefits. Replies treated in confidence. Write: Box C-71.

LIBRARIAN, MEDICAL OR PHARMACEUTICAL—(MLS) plus degree in biology or chemistry, to organize and supervise new library for pharmaceutical company in northern New Jersey. 5–10 yrs. exp. in pharm. library preferred. Excellent growth potential. Salary \$8–11,000 depending on experience. Send resume to Mr. D. F. Drescher, Beecham Inc., 65 Industrial South, Clifton, New Jersey 07012.



## FOR THE UNUSUAL LIBRARIAN

### an Aerospace Challenge

Here is an unparalleled opportunity to advance both your own career as a librarian and the science of computer-assisted literature search and retrieval.

**Your mission:** To support one of America's top teams of aerospace engineers and scientists.

**Your challenge:** To help design advanced, state-of-the-art systems for SDI . . . document control . . . and technical literature search and retrieval.

**Your tools:** One of America's finest aerospace technical libraries and a vast complex of the most modern computer and data-processing equipment.

**Your opportunity:** Working in the forefront of America's Aerospace Program . . . in exciting San Diego, California . . . and

building a solid career with one of the nation's leading corporations.

Applicants for this career opportunity should have an MS in Library Science and preferably a science background, but experience in all phases of the position is not vital.

Qualified applicants are invited to send a detailed resume to:

Mr. J. J. Tannone, Supervisor,  
Professional Placement and Personnel,  
General Dynamics,  
Convair Division,  
5651 Kearny Villa Road  
San Diego, California 92112

#### **GENERAL DYNAMICS**

*Convair Division*

*An Equal Opportunity Employer*



## POSITIONS WANTED

**LIBRARIAN**—Age 45, female. MLS to be completed January 1969. Two years exp. in university library, 10 years exp. as technician in industry. Would like position in industrial library. Write Box C-94.

**TECHNICAL LIBRARIAN/LITERATURE CHEMIST**—Diversified experience in indexing and documentation; abstracting and editing; comprehensive literature searches; interest and training in mechanized information retrieval. B.S. Chemistry, Chem. Eng. and graduate courses. Box C-95.

## FOR SALE

**BACK ISSUE PERIODICALS**—Scientific, Technical, Medical and Liberal Arts. Please submit want lists and lists of materials for sale or exchange. Prompt replies assured. G. H. Arrow Co., 4th & Brown Sts., Philadelphia, Pa. 19123.

**FOREIGN BOOKS and Periodicals.** Specialty: Irregular Serials. Albert J. Phiebig Inc., Box 352, White Plains, N. Y. 10602.

**CHEMICAL ABSTRACTS, 1927-1933 & 1935-1959.** Some bound. \$30 per vol. or best offer for lot. Write Box C-92.

**YOUR WANT LIST SOLICITED.** Large, select stock on hand. Extensive Search Service. Hoffman Research Service, 124-S Whitmore Road, Irwin, Pa. 15642.

**FREE! TWO VOLUME SET of Books in Print** (\$21.85 value) to new customers. Write our Mrs. Anne Lacey in the Library Order Dept. for particulars plus our own special free 70 page catalogue of Scientific & Technical Books of All Publishers. Very generous discounts on all technical/scientific publishers. L. H. Gleichenhaus Technical & Scientific Book Company, The Empire State Building, New York, N. Y. 10001.

**1949-1968 NUCLEAR SCIENCE ABSTRACTS**—missing 1955 and 1956 volumes. Bound till 1963, good condition, asking \$550. J. Ommert, AMP Inc., Harrisburg, Pa. 17105.

**QUICK TRANSLATION**—German and French technical articles, patents, letters, etc. translated by Ph.D. chemist (minor in physics). Quick service, confidential, very neat work. \$1 up per hundred words, typewritten in duplicate. Technical Translation Service of Buffalo, P.O. Box 21, Townline, New York.

**"ESCHEW OBFUSCATION" PLAQUE, 8½" x 4"**, typographically incredible, \$1.50; deluxe edition, \$2.50; grandiose, \$5.00. Wry Idea Co., Box 178-L, Rye, N. Y. 10580.



Complete composition, press and pamphlet binding facilities, coupled with the knowledge and skill gained through fifty years of experience, can be put to your use—profitably

## THE VERMONT PRINTING COMPANY

Brattleboro, Vermont

PRINTERS OF THE OFFICIAL JOURNAL  
OF SPECIAL LIBRARIES ASSOCIATION

## INDEX TO ADVERTISERS

Bell & Howell, Micro Photo Div. . .	762
R. R. Bowker Company . . . . .	761
Bro-Dart, Inc. . . . .	Cover III, 843
Cardmaster Company . . . . .	846
Center for Intercultural Documentation . . . . .	846
Demco . . . . .	766
The Faraday Press, Inc. . . . .	757
F. W. Faxon Co., Inc. . . . .	846
Gale Research Company . . . . .	Cover IV
Gaylord Bros., Inc. . . . .	763
Information Dynamics Corporation . .	764
Institute for Scientific Information .	845
The Library Association . . . . .	843, 847
Marquis-Who's Who, Inc. . . . .	846
3M Company, IM Press Div. . . . .	767
National Academy of Sciences . . .	768
Pergamon Press, Inc. . . . .	Cover II
Predicasts, Inc. . . . .	758
Society of Photo-Optical Instrumentation Engineers . . . . .	844
Special Libraries Association . . . . .	762
Technical Meetings Information Service . . . . .	840
The Vermont Printing Company . .	850
Western Periodicals Co. . . . .	844
John Wiley & Sons . . . . .	672
Xerox Corp., University Microfilms	842

# Instructions for Contributors

## General Information

*Special Libraries* publishes material on all important subject areas and on all methods and techniques for "Putting Knowledge to Work." New and developing areas of librarianship, information science and information technology are sought. Informative papers on the administration, organization and operation of special libraries and information centers are solicited. Scholarly reports of research in librarianship, documentation, education, and information science and technology are appropriate contributions. Bibliographies and bibliographic essays, discussions and opinions that are intended to be authoritative or that reflect original research are also published. Professional standards, salary information, education, recruitment and public relations are other representative subjects for inclusion. Controversy is not shunned.

As the official journal of the Association, *Special Libraries* also publishes reports of business of the Association and its subunits, as well as news of its members and for its members.

Contributions are solicited from both members and non-members. All papers submitted are considered for publication. Papers are accepted with the understanding that they have not been published, submitted, or accepted for publication elsewhere. *Special Libraries* employs a reviewing procedure in which manuscripts are sent to three reviewers for comment. When all comments have been received, authors will be notified of acceptance, rejection or need for revision of their manuscripts. The review procedure will usually require a minimum of six weeks.

**Types of Contributions.** Three types of *original* contributions are considered for publication: full-length articles, brief reports or communications, and letters to the editor. New monographs and significant report publications are considered for critical review. Annotations of the periodical literature as well as annotations of new monographs and reports are published—especially those with particular pertinence for special libraries and information centers.

**Editing.** Manuscripts are edited primarily to improve the effectiveness of communication between the author and his readers. The most important goal is to eliminate ambiguities. In addition, improved sentence structure often permits the readers to absorb salient ideas more readily. If extensive editing is indicated by reviewers, with consequent possibility of altered meanings, manuscripts are returned to the author for correction and approval before type is set. Authors are free to make additional changes at this stage.

**Proofs.** Authors receive galley proofs with a maximum five-day allowance for corrections. One set of galley proofs or an equivalent is provided for each paper. Corrections must be marked on the galley, not on the manuscript. At this stage authors must keep alterations to a minimum; ex-

tensive author alterations will be charged to the author. Extensive alterations may also delay publication by several issues of the journal.

**Reprints.** Order blanks for reprints are sent with most proofs. Special arrangements can be made to obtain reprints of letters and book reviews.

## Manuscripts

Organize your material carefully, putting the significance of your paper or a statement of the problem first, and supporting details and arguments second. Make sure that the significance of your paper will be apparent to readers outside your immediate field of interest. Avoid overly specialized jargon. Readers will skip a paper which they do not understand.

For each proposed paper, one original and three copies (in English only) should be mailed to the Editor, *Special Libraries*, 235 Park Avenue South, New York 10003. The manuscript should be mailed *flat* in an envelope of suitable size. Graphic materials should be submitted with appropriate cardboard backing or other stiffening materials.

**Style.** Follow a good general style manual. The University of Chicago Press *Manual of Style*, the style manual of the American Institute of Physics, and the *Style Manual for Biological Journals* (published by the American Institute of Biological Sciences), among others, are appropriate.

**Format.** All contributions should be type-written on white bond paper on one side only, leaving 1.25 inches (or 3 cm) of space around all margins of standard, letter-size (8.5 × 11 inch) paper. Double spacing must be used throughout, including the title page, tables, legends, and references. The first page of the manuscript should carry both the first and last names of all authors, the institutions or organizations with which the authors are affiliated, and a notation as to which author should receive the galley for proofreading. All succeeding pages should carry the last name of the first author in the upper right-hand corner and the number of the page.

**Title.** Begin the title with a word useful in indexing and information retrieval. The title should be as brief, specific, and descriptive as possible.

**Abstract.** An informative abstract of 100 words or less must be included for full-length articles. The abstract should amplify the title but should not repeat the title or phrases in it. Qualifying words for terms used in the title may be used. The abstract should be typed with double spacing on a separate sheet.

**Acknowledgments.** Credits for financial support, for materials and technical assistance or advice may be cited in a section headed "Acknowledgments," which should appear at the end of the text. General use of footnotes in the text should be avoided.

**Illustrations.** Finished artwork must be submitted to *Special Libraries*. Follow the style in current issues for layout and type faces in tables

and figures. A table or figure should be constructed so as to be completely intelligible without further reference to the text. Lengthy tabulations of essentially similar data should be avoided.

Figures should be lettered in black India ink. Charts drawn in India ink should be so executed throughout, with no typewritten material included. Letters and numbers appearing in figures should be distinct and large enough so that no character will be less than 2 mm high after reduction. A line 0.4 mm wide reproduces satisfactorily when reduced by one-half. Graphs, charts, and photographs should be given consecutive figure numbers as they will appear in the text. Figure numbers and legends should not appear as part of the figure, but should be typed double spaced on a separate sheet of paper. Each figure should be marked *lightly* on the back with the figure number, author's name, complete address, and shortened title of the paper.

For figures, the originals with three clearly legible reproductions (to be sent to reviewers) should accompany the manuscript. In the case of photographs, four glossy prints are required, preferably 8 × 10 inches.

**References and Notes.** Number all references to the literature and notes in a single sequence in the order in which they are cited in the text. Cite all references and notes but do not insert reference numbers in titles or abstracts.

Accuracy and adequacy of the references are the responsibility of the author. Therefore, literature cited should be checked carefully with the original publications. References to personal letters, abstracts of oral reports, and other unedited material may be included.

References to periodicals should be in the order: authors, article title, unabbreviated journal

name, volume number, issue number, inclusive pagination, and date of publication.

SMITH, John, JONES, B. H. and DOE, Richard. Special Librarianship in Action. *Special Libraries*, v.59 (no. 10): p.1214-21 (Dec. 1968)

References to books should be in the order: authors, title, city, publisher, year, pagination.

BROWN, Abel. *Information at Work*. N. Y., Abracadabra Press, 1909. 248p.

### Full-Length Articles

Articles may range in length from about 1,000 words to a maximum of 5,000 words (up to 20 typed double spaced manuscript pages). Provide a title of one or two lines of up to 35 characters plus spaces per line.

Insert subheads at appropriate places in the text, averaging about one subhead for each two or three manuscript pages. Keep the subheads short (up to 35 characters plus spaces). Do not use more than one degree or level of subheads in an article. Provide a summary at the end of the article.

Write a brief author note, and include position title and address. In the author note, include information concerning meetings, symposia, etc. where the paper may have been presented orally. Also submit recent glossy black-and-white photographs of the authors.

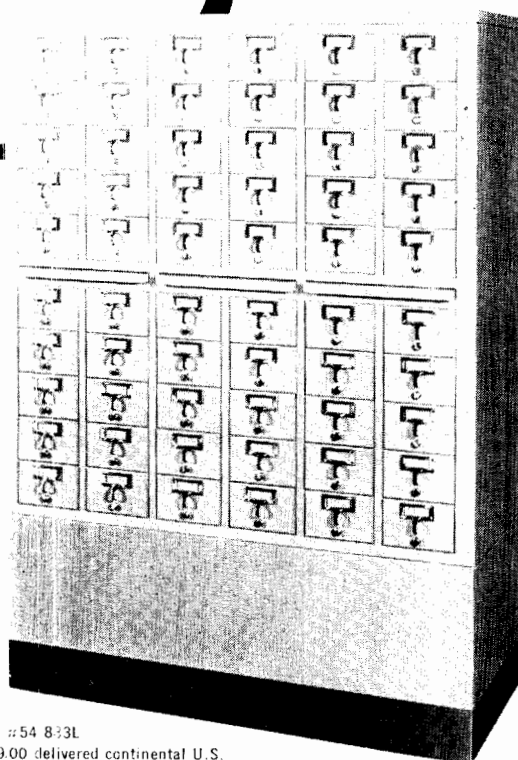
### Brief Communications

Short reports or communications will usually be less than 1,000 words in length (up to 4 typed double spaced manuscript pages). List the authors on the last page of the text in the form of a signature and include a simple mailing address.

**What's  
a custom cabinet like you  
doing in an "off the shelf"  
line like this?**



Cat. #54 868L  
\$164.75 delivered continental U.S.



Cat. #54 833L  
\$789.00 delivered continental U.S.

At Bro-Dart we believe stock furniture can be produced well *and* economically. These stars of our "54 Series" stock furniture line prove it.

The all-birch-and-maple magazine rack (with a capacity of 22 periodicals) and the card catalog cabinet (from our full range of solid and sectional cabinets: a

beautiful performer with 60 aluminum or wood trays, 72,000-card capacity, sliding shelves) are just two of our featured headliners. All are available in light or dark finishes, or (for a little extra) custom finished to match your present equipment. Write for a playbill.

Ask for the Series 54 Catalog.

**BRO  
DART**

Dept. SL-12a, P.O. Box 923 • Williamsport, Pa. 17701

# ONE OF THE YEAR'S MOST IMPORTANT NEW REFERENCE WORKS

## Library of Congress and National Union Catalog Author Lists, 1942-1962: A Master Cumulation

152 VOLUMES  
OVER TWO MILLION ENTRIES

\$2888.00

Each Volume Billed on Delivery

\$19.00

WRITE  
FOR DETAILED BROCHURE  
AND ORDER FORM

With the announcement of its plans to begin immediate publication of a 152-volume, one-alphabet cumulation of the four important supplements to *A Catalog of Books Represented by Library of Congress Printed Cards*, Gale has launched one of the major publishing events of 1969.

Gale's *LC-NUC Author Lists, 1942-62*, includes the entries in the following four supplements:

*Catalog of Books Represented by Library of Congress Printed Cards - Supplement (1942-1947)*

*The Library of Congress Author Catalog, 1948-1952*

*The National Union Catalog: A Cumulative Author List, 1953-1957*

*The National Union Catalog: A Cumulative Author List, 1958-1962*

Thus, the master cumulation is a one-stop source for quick, easy reference to bibliographical and cataloging data covering books, maps, atlases, periodicals, and other serials cataloged by the Library of Congress during the twenty-one years, 1942-1962, and by other North American libraries, 1956-62.

The format and type size of the entries now in the supplements will be retained in the cumulation, assuring the smooth continuation of any Polaroid or other photographic cataloging system now in use. High-quality printing and binding, plus the use of permanent, durable paper, will insure that the set withstands years of constant use.

Of course, a much larger and more inclusive cumulation, titled *National Union Catalog Pre-1956 Imprints* (and often called just "Mansell," after the publisher) is in early stages of publication, with completion expected in 1979, and libraries unable to afford both cumulations should give serious consideration to Mansell. Subscribers to the Gale cumulation will have in the meantime, however, not only the advantage of the *immediate* availability of this twenty-one-year bibliographical record but also the corollary gain of an *immediate* saving in the time and labor now being expended by catalogers, bibliographers, acquisitions personnel, scholars, and all other users of the present four separate LC-NUC author lists. In fact, the Gale cumulation should increase the productivity of library personnel and other researchers to a degree that its cost will be recovered many times before completion of *Pre-1956 Imprints* by Mansell in 1979.

Twelve or more volumes of the cumulation are scheduled for publication each month, with the entire 152-volume set scheduled for completion by the end of 1969. Production on the initial volumes is now well under way. Total cost of the set is \$2888.00 or a cost per volume of \$19.00.

Write us or call us collect if you want any additional information before placing your order or tentative reservation.

## GALE RESEARCH COMPANY

Book Tower, Detroit, Michigan 48226 1-313-961-2242